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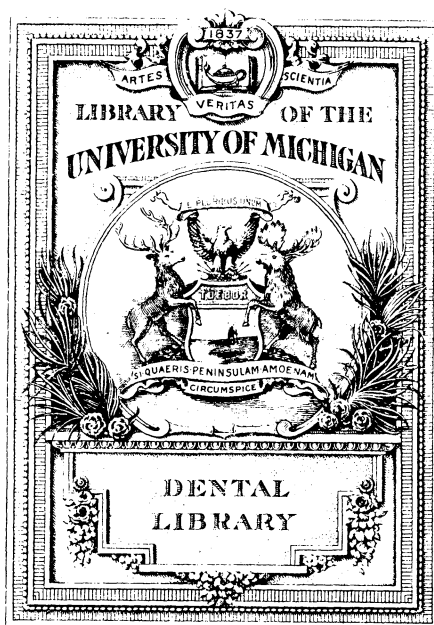
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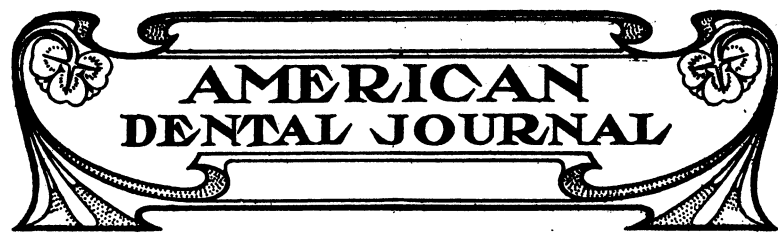
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LISTERINE TOOTH POWDER

A fourth of a century of continued, satisfactory employment of Listerine has demonstrated to many who have used it during this entire period, that Listerine is the best antiseptic for daily employment in the care and preservation of the teeth. Listerine Tooth Powder, then, is not intended to supplant Listerine in the daily toilet of the teeth, but is offered in response to a popular demand for a frictionary dentifrice to be used in conjunction with this well-known and time-tried antiseptic.

Listerine Tooth Powder is composed of precipitated carbonate of calcium, carbonate of magnesium, oil of cananga, and the antiseptic constituents of Listerine.

The simplicity of its formula, in itself commends the powder. The English precipitated chalk and magnesia are the finest obtainable, and absolutely free from grit; the oil of cananga possesses properties opposed to inflammatory conditions of the gums, and together with the antiseptic constituents of Listerine, adds to the desirable qualities of the product. However, it is to the list of articles which have been omitted from the formula that special attention is directed, and the manufacturers believe the profession will agree that the absence of pumice stone, cuttlefish bone or other abrasive substances, and of sugar, orris root or superficial perfume of any character (the usual ingredients of tooth powders and liable in themselves to fermentative action in the mouth), is a distinct advantage.

Lambert Pharmacal Co.
St. Louis, U. S. A.

PROGRESSIVE COURSE OF PRACTICAL INSTRUCTION

PORCELAIN.

T. ELHANAN POWELL, D. D. S.

CHAPTER III.

It is most difficult to add anything new to the subject of porcelain. The author's aim in this course of articles is to set forth those methods which in his judgment will prove successful in the hands of the average operator.

He disclaims any credit for originality either in methods or descriptive language, his ambition being to bring to the student the most practical ideas and methods in vogue, thus enabling the beginner to adopt a line of procedure which will eliminate as far as possible the failures most commonly made and thus insuring a reasonable success, without which one has difficulty in keeping up one's courage.

According to some operators, porcelain is indicated wherever caries has developed sufficiently to destroy enamel and dentine tissue to such an extent that artificial repair is necessary, and while it has apparently been demonstrated that some men can make permanent fillings of porcelain in most any class of cavity, yet the conservative operator hesitates to follow such radical leadership, but has limited the use of porcelain to certain classes of cavities which will now be enumerated.

1st. Porcelain inlays should be used in all conspicuous cavities where gold would be objectionable; many otherwise beautiful mouths have been rendered hideous by a too lavish display of yellow metal.

2d. For slender teeth, with poor structural conditions, porcelain will strengthen and sustain when fillings of other material would fail.

3d. When the physical condition of the patient will not permit the nervous strain of a long sitting for condensation of gold.

4th. In pyorrhea, when the teeth are badly loosened, making condensation of gold next to impossible.

Dr. F. E. Roach has classified cavities in which porcelain is indicated in order of their favor, and as I do not see how this classifi-

cation can be very much improved upon I shall use it here, making such changes as time and experience will justify.

1. Labial.
2. Labio-gingival.
3. Proximal cavities in incisors and cuspids.
4. Buccal.
5. Incisal.
6. Proximo incisal.
7. Occlusal.
8. Mesio occlusal.
9. Disto occlusal.

The labial cavities are first in favor on account of their conspicuous location and the ease with which they can be constructed; also, their ease of access and freedom from masticatory force make these inlays almost ideal.

No excuse can be offered by the intelligent dentist for making this class of cavities anything but porcelain.

Next in favor are the labio-gingival inlays, which are almost as conspicuous as the labial and furnish an additional argument for porcelain on account of the excessive pain usually inflicted in an effort to force the gum out of the way in placing the rubber dam. This is accompanied by the constant imminence of the flow of saliva, causing extreme aggravation and failure. These inlays are a little more difficult of construction, consequently they must occupy second place.

The third place is given to proximal cavities in incisors and cuspids on account of the difficulty in construction; but their being in a conspicuous place and free from stress make them most desirable for inlays. While they are third in favor, I think they should occupy first place in importance, as these teeth are the first to decay at this point, and few are the patients who reach their twentieth year without having all or nearly all affected by decay proximally.

Since only a small proportion of our patients are subject to caries either labially or labio-gingivally, and are subject to the proximal cavities, it is well to give the latter the prominence which they deserve, and accordingly fit ourselves to cope with them.

The fourth place is given to buccal inlays back to and including the first molars, as they are comparatively easy to make and are rather

conspicuous in some mouths and free from stress. Such cavities in second and third molars might well be inlaid with gold or porcelain, leaving an opportunity for choice to the operator or to the patient, but I, personally, should choose porcelain because of its immunity from lodgement of food particles, there being no kind of food substance which would cling for any length of time to the glazed surface of porcelain.

Incisal restorations are given fifth place because they were formerly considered hazardous, but desirable for aesthetic reasons, but they are now not considered particularly hazardous because a change to a practical method in the preparation of cavities, so that a mechanical retention is obtained, has demonstrated their usefulness to such an extent that expert operators no longer hesitate to use them optimistically.

Proximo incisal restorations, while occupying sixth place, are not necessarily hazardous, and with the advanced ideas on cavity preparation have proven as safe in my practice as almost any other class, and their conspicuousness renders them particularly desirable. While they are difficult, they are not sufficiently so to cause any patient operator to hesitate to use them.

Occlusal inlays are inconspicuous and hazardous and are not recommended. These occupy seventh place.

Mesio-occlusal inlays are desirable for aesthetic reasons, and there are many places where they can be safely employed. In such cases their use is justifiable, but they are extra hazardous and are given eighth place.

Disto occlusal restorations are given ninth place, because they are inconspicuous, difficult and the force of mastication makes them unsafe; while they may occasionally be used in cases of frail walls and loosened teeth, the consensus of opinion among the best operators is against them in ordinary cases.

The above classification is fairly comprehensive, but the individual judgment of the operator must be exercised in each case; as, for instance, in Class 6, the proximo incisal inlays are recommended, and they usually do good service if properly constructed, but they are decidedly contra-indicated in cases where the tooth is very thin, labiolingually, tapering to a knife edge at the incisal end. This kind of a tooth is difficult of restoration, even with gold, and my practice is to

restore these cases with a gold inlay rather than by either porcelain or gold foil.

A much better contour can be made with a gold inlay and a greater edge strength can be obtained at the same time. The operation is much simplified and quite satisfactory except for aesthetic reasons.

There is another class of inlays much in favor now since the introduction of moldable porcelain. These are large restorations in bicuspid and molars, either bucco-occlusal, mesio-occlusal, or disto-occlusal. These cavities are brought into the desirable list by that quality in the porcelain which enables the operator to form the inlay in the cavity like cement, whence they are removed after hardening and are baked like other porcelain.

The resistance of this porcelain is quite marvelous, and on this account it has come to be quite a favorite among some operators for posterior work.

The color scheme has not as yet been satisfactorily adjusted, but it is certainly a great improvement on amalgam and can frequently be used to advantage when the only alternative is a crown. The color can also be much improved by baking the enamel colors over the biscuit. I simply mention this in passing, so that my classes of cavities may safely be extended to 10.

At some future time I shall probably resume this subject, when it may be necessary to devote two or three chapters to it.

Remember that a child must creep before it can walk, and you must start into this work conservatively, beginning with Class 1, finishing these satisfactorily before taking up Class 2, etc.

To attain success in this work, one must study closely every minute detail, mastering the digital technique of each step before one can expect to cope successfully with the subsequent and more difficult cases.

It is a good plan to observe, now, cases as they come in, noting them carefully, dividing the cavities into their proper classes, with a view to filling them with porcelain, as soon as you have acquired the necessary technique.

(To be continued.)

OPERATIVE DENTISTRY.

BY R. B. TULLER, D. D. S.,

CLINICAL PROFESSOR OF OPERATIVE DENTISTRY, CHICAGO COLLEGE OF
DENTAL SURGERY.

SHOP TALKS No. 16.

REDUCING PAIN.

One of the first things to be considered in the operation of excavating cavities in teeth is to make it as painless as possible.

People are not all built alike, and just how this may be accomplished requires some thought and calculation.

The sensation of work on the teeth is not agreeable to the most hardy, and though such people may endure without much complaint, they will be grateful for any reduction of discomfort.

First of all endeavor to establish confidence that you know just what steps must be taken, and then get the patient into the right frame of mind by assurances—not that it won't hurt when you know it may, probably will—but that the chipping away of enamel, for instance, to open up the cavity is the least objectionable and shortest way to get rid of that portion of substance; also that burs and excavators are sharp and keen, which makes cutting less painful than dull ones, besides cutting faster.

It is pretty generally understood among dentists that the patient who will relax muscles and tension and yield to the operator's control will suffer less than the one who becomes tense and rigid in the effort to stand the strain.

Then, again the noise of whirling burs and grinding wheels, it must be remembered, that these things that may seem nothing to the operator are largely magnified in the patient's mouth, due to conductivity of bones of the head. It is therefore essential to have smooth running engine parts, with no chattering, and burs and stones so controlled that they do not jump, but do steadily, and as smoothly as possible, what is required of them. Rapidity of revolution is often desirable and jars less, provided the bearing on is properly controlled, for, of course, a rapid bur or stone, if held down too closely, will produce more friction, and decidedly quicker, than a slower one. The

size of the bur or stone also cuts a figure, and the coarseness or fineness of the same. The writer has little use for coarse cut burs.

Unquestionably the teeth of some patients are more sensitive than others, and in the same mouth sensitivity varies with general physical condition. It is a common expression to say one's teeth are all on edge, and they surely feel that way more one time than another.

In seeking to reduce dental operations to a really painless affair, the use of pressure anaesthesia has been largely used in the past several years, and we know that in many instances we are able to entirely benumb the tooth so that there is absolutely no sense of pain, even if we penetrated to the pulp itself; but if we desire a temporary obtunding—if we wish to conserve the pulp—we cannot be so certain that we may inject medicaments into it through the dentinal tubuli and be certain that we will have a return to full normal conditions. They may appear to be so, but some good authorities, like Dr. G. W. Cook, seem to be certain that they do not regain normality; but that degeneration begins to take place and continues until sooner or later the pulp dies.

So in our efforts to render our operations painless we have to consider the possible and probable consequences of doing injury to the pulp that it will not recover from. All the story of pressure anaesthesia, particularly under high pressure, that carries the medicament not only into the pulp, but on through and beyond the apex, has not been told. The results of such treatment may not be fully apparent until several years after.

There are two ways of reducing sensitivity that are directly opposite; one is to dehydrate the cavity (and there is pain generally in doing it) and the other is to keep it flooded with warm water.

In the first instance the drying out of the ends of the tubuli that end in the cavity being excavated, while at first painful, very generally renders the protoplasmic substance less so, the drier it gets. Frequently the water withdrawn or evaporated may be replaced with good effect by some obtunding medicament. In fact, the value of most any of the obtunding agents used simply to flood the cavity is little without first dehydrating. Of course, it is understood that some medicaments, like absolute alcohol and chloroform, are dehydraters. That is to say, they will absorb or take up moisture (water) to a limited extent, but with considerable force. Thus they are exceedingly useful in withdrawing the moisture from the dentine that absorbent cotton

would not reach. It is well to say here that alcohol does not affect rubber dam, while chloroform will so soften it that it will tear and become leaky. Use alcohol with rubber on.

Now, where flooding with warm water is employed, it is usually done before the rubber dam is adjusted. It acts as a lubricator and reduces friction, and thus keeps the bur from heating. It is the heat of friction that produces most of the pain when burring out a tooth. The saliva of the mouth is hardly sufficient as regards flooding. The proper way is to have a continuous fine stream of tepid water playing directly into the cavity, and in this way the debris is washed out as well as the bur being kept cool, and friction reduced. In the dried out cavity, it is well to repeat, the protoplasmic contents of the tubuli becoming dried and shrunken, sensitivity is reduced. It often becomes necessary to repeat the drying as the dentine is cut away, or it is necessary to follow with some medicament that has obtundent properties.

Dr. Jno. P. Buckley recommends a combination of cocaine, menthol and chloroform. The writer has frequently had excellent results with a saturated solution of chloride of zinc. This will at first cause a little pain, but will permit usually of considerable cutting before sensitivity is reached. If we get too close to the pulp with some of these agents we are liable to do permanent injury, or the same sort of injury done by pressure anaesthesia. That is to say, when our agents for obtunding pass the boundary of the pulp, the odontoblastic membrane, we have inflicted some injury on the pulp, and while immediate deleterious results may not follow, we are not certain that death of that pulp may not occur after more or less time.

The death of a pulp in a tooth of a mature person is not so serious a matter, as concerns the future of the tooth, if it occurs at a time and place and under conditions where it may be properly attended to by a qualified dentist, but it not infrequently causes considerable distress before death, and if not attended too promptly there may be more serious trouble after.

If we use pressure anaesthesia to obtund a mature tooth, and anaesthetize the pulp completely, it is a question sometimes if it is not the better way to eliminate the pulp and filling roots and make a clean job of it. If we knew that death of pulp would surely follow, that, no doubt, would be good practice if we feel called upon to use the pressure anaesthesia method.

Call it hypnotism or what you like, there are certainly a great many cases where suggestion of the right sort and in the right way helps to eliminate pain, and the experience of most practitioners goes to show that the people who make little or no effort to control themselves and submit to some pain are the ones generally who we have the most unsatisfactory results with when we attempt any of the remedies to obtund dentine.

To recapitulate, let us say: Gain the confidence of your patient that first of all you understand your business; next convey the idea that your equipment is not lacking to do the best work with; that is to say, smooth engine, sharp burs and cutting instruments. We don't say this in so many words, but we can say: "It is hardly possible to work without some discomfort, possibly some pain, but if you will try and do your part you will find that, with the sharp burs and excavators I use, the worst will be quickly over, etc., etc."

We all try to do our work without much attention to obtundents if we can, as they always consume time with, an uncertainty as to results. We can readily dry or flood the cavity, as we see fit, and if we use the drying process it is not much trouble to introduce 2 per cent cocaine, menthol and chloroform. The trouble is, waiting for them to act. Beechwood creosote is soothing, also carbolic acid and the essential oils.

When cutting, every stroke should count—should accomplish just what we intend it to—and not make useless scratches that hurt as much or more than the real cutting.

Be cautious of the high pressure anaesthesia. Prof. Miller of Berlin, in his experimenting, found that such pressure as could be done with thumb or finger or an equal pressure was sufficient. High pressure instruments carry enough liquid to anaesthetise the entire jaw or the whole head if it were forced through the pulp and apex of tooth. No such quantity is ever needed. The fifth part of a drop, or the tenth part, made to go where wanted, will do the business.

We all have patients whose teeth are so sensitive that we have to fill them temporarily. Oxychloride of zinc cement is good for that. In six months the tooth will likely come back with sensitivity very much reduced. Sometimes such temporary fillings for two or three days bring good changes. It is probably unwise to persevere too long with people we know we are severely punishing. Resort rather to temporary fillings of an obtunding nature and try them again later.

DENTAL PATHOLOGY.

BY GEO. W. COOK, B. S., D. D. S., CHICAGO, ILL.,
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We have already said that infectious fever depends upon an irritative condition brought about by micro-organisms and their products, the latter being the principal cause in individual cases. We have also stated that both the animal and vegetable parasites may cause fever. The rise in temperature in the animal organism is a symptom of some form of infection. The malarial parasite comes the nearest to the specific cause of fever. Many forms of bacteria are capable of establishing a rise in temperature, when introduced into the system, the duration of which is according to the cause of the irritant. If one bacterium can find a habitat in the tissues and cells of the body and there multiply for some time, the rise of temperature will be in accordance with the number of parasites that have been able to live and multiply in the tissues.

There are certain tissue changes that take place as the result of fever, and as we have previously stated these tissue changes are very largely due to the acceleration of combustion. Thus in case of intoxication with certain forms of products the heat centers of the brain are stimulated, thus bringing about a destruction of the red blood corpuscles, a cloudy swelling of the kidneys, stimulating the irritability of the epithelium cells. As a result we have what is usually known as hyaline degeneration of the kidney cells, and sometimes the heart's muscles take upon themselves a similar degeneration. These mechanical and chemical changes interfere with the secretion and excretion of the body, and the elimination of waste products are so interfered with that a small part of the intoxication material may be present in the body, but a considerable change of the mechanism of certain tissue cells may cause considerable interference with the tissue changes, and in this way disturb the function of the body. Certain blood changes may be observed if a microscopic examination is made. There is a certain haemolytic action and the erythrocytes are destroyed in more or less quantities. It is the opinion of some writers that hemolysis is the principal features to be noted in blood changes in cases of fever. In acute alveolar abscesses, and especially where the infection is se-

vere, this haemolytic change is very marked. I have also made blood counts in cases of acute pyorrhea alveolaris where the general temperature of the body was not very high, and the conditions of the individuals were such that the increase of temperature could not be recognized except by blood changes. The erythrocytes were almost entirely absent for six weeks in one case which I examined, but after local treatment of the case, which consisted principally of removing all deposits from the pockets and thoroughly washing out and forcing a 2 per cent salt solution well down into these pockets, the blood changes began to assume a normal appearance. The patient would be considered, by those who wish to state so dogmatically, cured. In eight or nine months, after the patient was discharged for some time, with instructions as to what he should do in oral hygiene, he returned again with all the phenomena he had previously displayed. However, it might be said that the patient was not suffering so extremely with the teeth, but the blood had again assumed very much the appearance that it had before; the red blood corpuscle count was three and a half million, with an increase of leucocytes and a loss of erythrocytes. The urine was dark in color and looked as though red blood corpuscles might be present; but a careful microscopic examination revealed the fact that it was due to some other cause and not to the blood pigment.

There are so many changes in metabolism in the body, even when there is only a slight infection, that it seems quite wonderful at times now to account for such changes. But nevertheless they exist there and many times in certain infections of the oral cavity. It is essential that we study carefully all of the conditions and establish so far as possible a true diagnosis of what is truly the predisposing factors, and what the exciting cause is due to. It is fair to presume that when a person is in good physical condition, and the metabolic processes of the body are not interfered with in any way, we have a healthy individual, but in some of those particular cases we will have the severest types of infectious processes in the body, and especially about the roots of broken down teeth, and in certain cases of pyorrhea alveolaris.

It is usually presumed that the blood in healthy individuals is alkaline and that it loses in proportion its alkalinity as the temperature rises in the body above the normal. Minkowski has found lactic acid in the blood of dogs in experimental infection, and from blood examinations and various other sources of chemical analysis it is be-

lieved that the alkalinity of the blood more nearly approaches acidity in accordance with the severity of the fever, and also the class of infection that is causing the rise of temperature. These are all factors that enter into and demonstrate beyond question of doubt that even in the slightest infection there are certain mechanical and chemical changes taking place in the tissues, that, if continued for any great length of time, may result in some striking forms of pathological changes that become permanent and may be the active factor that will eventually destroy the physiological function of the entire animal organism.

A long-continued alveolar abscess, though it may become chronic in character and little noticeable in appearance externally, may be the result of establishing an eventual physiological disturbance that will manifest itself in some form of disease quite remote from the locality in which the active process is going on. It has been said by an able writer that every cellular change that deviates from a normal function in the body means a loss in the entire function eventually, if continued for any definite length of time. Therefore, any process that manifests itself in abnormalities will eventually lead to some changes that result in some abnormality. The majority of metabolical disturbances nearly always manifest themselves in some form of inadequate growth. As has already been stated in the previous chapter, an accident to the embryological structure may result in some tissues or organs becoming atrophied; in other words, in preventing them from developing. There may appear a rudimentary organ, or it may result in only a partial formation of the organ and leave certain functional activities of the body interfered with, and the animal may never become perfectly formed in general appearance of the type. There is a greater probability that the type of the specie may be maintained morphologically than physiologically; in other words, there is more liable to be a chemical than a morphological change. However, in the chemical changes that take place certain physical characteristics must make their appearance. Those who are in the active practice of dentistry have constantly brought to their notice certain well defined characteristic appearances of the teeth, in which there is a complete deformity of tooth structure, and it will be found on chemical analysis that the inorganic salts of this tissue has been changed from what would be a chemical, physical, staple compound. To discuss the well-known laws that gov-

ern physio-chemical processes and upon which scientific physiology is placed, would require so much time and space that we would be encroaching upon the good nature of the individual who wants only the practical in his calling, and seeks for money rather than knowledge.

The physio-chemical processes and the mechanism of nutrition and all the functions that enter into it are interfered with in some form or other every time a parasitic organism enters the tissues or cells and secretes itself there for any great length of time. Therefore, we have in the past and are at the present trying to seek out the cause for which the human race is constantly afflicted, from the earliest conception of the establishment of the mechanism that goes on between the sperm cell and the ovum, which becomes destined through a struggle for existence to become a distinct individual capable of organizing and establishing all the functions and maintenance of life. The organisms, most usually a lower form of life, are constantly meeting and overcoming certain functional activity in the other forms of living substances, and usually the higher of the kingdom of which it belongs. The wheat-rust is one of the prevailing types of disease that exists in the vegetable kingdom. The fungus that establishes this disease process is a very low form of the vegetable kingdom, and after it has passed through a certain developmental process it is capable, when it comes in contact with a field of wheat that has grown up under certain environments, of destruction. The environing conditions in almost every instance are produced by certain forces of the sun's rays on the wheat field, and also the quantity and quality of rain that has fallen on the wheat. The sun and rain-fall and the quantity of nitrogen in the earth are three of the principal factors in bringing about the predisposition of the wheat field to the rust fungus. It will also be borne in mind, from purely a biological point of view, that the fungus of wheat rust cannot assume its parasitic nature on the wheat-stalk unless it has lived somewhere in the limits of certain phosphorescent conditions, and these conditions are mainly brought about by the absence of light and the presence of a certain degree of moisture. When the fungus has grown under these circumstances it can then establish its habitat in the wheat field, and when there for a short time it assumes a pathogenetic parasitic life, and in this way produces a rapid and complete destruction of the wheat field. While, as we know, the physiological functions of the body are very different to the functions

of the vegetable life, we are more or less confused, and especially in the very lowest forms of animal and vegetable life, as to which kingdom this or that may belong, and yet in the higher forms of the animal life the mechanism of physiological activity differs so materially that it seems difficult to make a biological comparison in any way that would justify an analogy. But we have in the destruction of certain tooth tissue a condition that if we view it from a physio-chemical process and take into consideration the biological phenomena of life, we can more clearly understand that the tissues have developed under circumstances either favorable or unfavorable for the compounding of certain tooth tissue. Now if the environing conditions have been such in the early embryological formation of the body tissues as to produce certain deformities of chemical and physical structures of a tooth, we have there established first and foremost one of the principal factors that enter into the destructive process of tooth tissue. This does not necessarily mean that the tissue has become degenerated. Perhaps all that we know about the disturbance of the nutrition of the body of the mother in pregnancy is that there is certain phenomena of nutrition that is produced by certain forms of these low vegetable parasitic life that inhabit certain internal cavities of the body, like the mouth, the focus, the stomach and the intestinal tract and destroy certain functional activities that would aid digestion, and in this way produce the embryological developments. We have in these accidental disturbances aplasia and hypoplasia. The first term is applied to certain arrested developmental processes, such as acardiac, acephalic monsters, or in which a head may fail to develop, or the head develop without much body. While these are classed among degenerate forms, they are not degenerated in the strictest sense of the word, but all or any one of these conditions may be developed, due solely to some disturbed nutrition. Now while these disturbed conditions are exaggerated perhaps, such conditions may appear only in obscurity and may never be detected in the body, and, in fact, many imperfections may occur that could not be observed with anything but the highest magnifying glass.

(To be continued.)

ORIGINAL CONTRIBUTIONS

A COMPARATIVE STUDY OF THE PHYSIOLOGICAL ACTION OF ANAESTHETICS.

C. M. PADEN, M. D., D. D. S., CHICAGO, ILL.

The amazing developments in dentistry during the last twenty years have produced many specialists. It was once thought that the field of dentistry was narrow and that any man of ordinary ability should be able to cover every part of it and have time left to go fishing or hunting, as his taste might lead.

The demands now made on the skill of the dentists in centers of culture and wealth and the very considerable rewards which attend peculiar skill in any line have led many dentists to perfect themselves in one branch of the practice to the exclusion of others. Thus the city practitioner whose time is valuable can no longer attend to his own regulating cases. He refers them to the orthodontist, whose time is given almost exclusively to this work. Many dentists confine themselves to porcelain work and refer all other work to other practitioners.

But most of all is this attitude true of extracting. It requires constant practice to be skillful with forceps, and it is unclean work at best. In many cases it brings the general practitioner no remuneration, because he may be required to deduct the price received from other work. Furthermore, and most potent of all, the practice of letting the patient bear the pain of extraction by sheer grit no longer obtains, and the extracting specialist must be prepared to lull the patient into a quiet sleep, remove the roots or teeth in a skillful manner and arouse the patient to the consciousness of a happily completed operation.

The writer has for some time been an extracting specialist enjoying a practice among the dentists of Chicago and a growing practice in the administration of anaesthetics for physicians in minor surgery cases.

The necessities of practice, the rapid succession of patients, the inconveniences of inducing a true surgical anaesthesia and the impera-

tiveness of rapid recovery without nausea, has long since compelled the writer to abandon the general use of chloroform and ether in favor of the quicker acting anaesthetics, nitrous-oxide and somnoform. His heart being in his work, he was led to note the clinical manifestations of these anesthetics and to seek the best knowledge obtainable in their various physiological manifestations. To his surprise he found the literature on the subject scanty and indefinite.

Anesthetics differ as do other drugs and manifestations of the same anesthetic differ with different patients, or with the same patient under different conditions. So noticeable may be these differences that the operator often puts the anesthetist through an impromptu quiz on the subject, expecting of course that he can answer ordinary questions in his own specialty. Study the manifestations as he would, and read as best he could, the writer often found these questions very embarrassing because he knew of no conclusive answer. There slowly grew up in his mind the intention of taking some radical course for the settling of these questions, so far as they were capable of settlement. It is the purpose of these articles to tell of the steps taken and the solutions they brought.

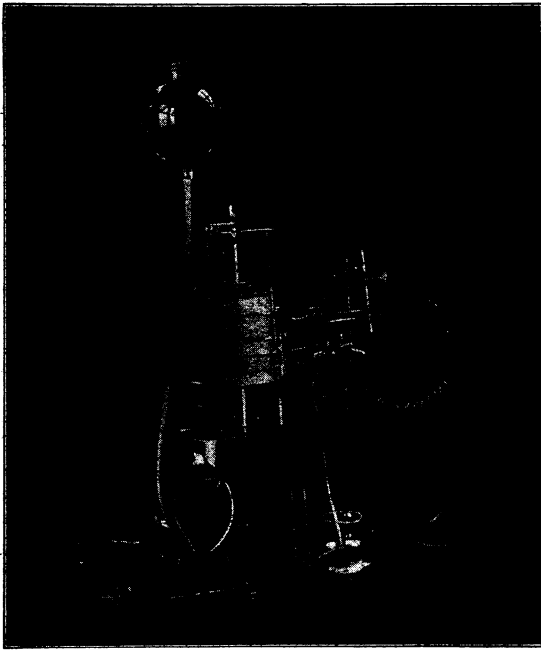
The line of information sought would have been easy of answer had the interest been in chloroform or ether, but I wanted to learn the abilities of the newer anesthetics, whose actions are more rapid. For the five years past I had been administering nitrous-oxide and somnoform, with a preference toward the latter on account of the simplicity of the apparatus, the short induction time, long anesthesia and uneventful recovery. Following the account of a death at Rockford, Ill., which seemed well authenticated, there came the reports of a whole harvest of deaths. Being vitally interested, I ran down nearly every report, only to find them to be like the story of the three black crows.

When a dog is down many folks like to kick him, and so it seemed with somnoform. I heard so many accusations against it, and from men of high standing, that my own attitude became a little uncertain, and I determined to find out whether they were wrong or I was.

After much study, the best way to do this seemed to be to take a post-graduate course in anesthetics in an institution of unquestioned standing. As a graduate of the Dental Department of the University of Illinois, I turned naturally to my Alma Mater. At the P. & S. Medical College I learned that a post-graduate course in anesthetics was a new departure, but after a consultation with the Superintendent,

with Dr. Dreyer, Professor of Physiology, and Dr. Fantus, Professor of Therapeutics, a special course was arranged and, a time for beginning having been set, I departed, happy with the thought that my doubts and questions would be speedily settled.

But my course was not to be so easy. On my first morning I was conducted to Dr. Dreyer's laboratory and introduced to as formidable an array of apparatus as it has ever been my fortune to meet. Nor were the terms much less formidable. The first piece of this apparatus was known as the Ludwig Endless Roll Kymograph. Its purpose is to record the rate of heart beat, the blood pressure and the respiration in animals. Of course I knew in a general way that the only plan for

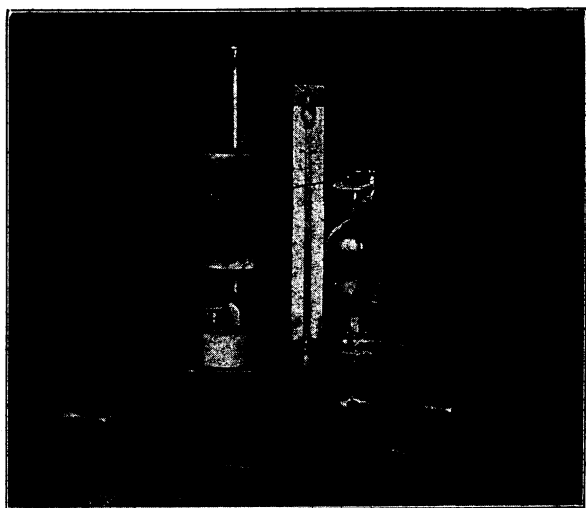


KYMOGRAPH.

noting the action of an anesthetic is to note its effect on the principal vital functions, and I knew in a general way, also, that there were instruments for that purpose. So now here I was, face to face with one for the first time, and having, I fancy, something the same feelings as the raw recruit to a battery as he looks on the cannon he is to help fire. Here is a picture of the Kymograph.

But in studies so important as anesthetics it is not sufficient "to try it on the dog," so a second piece of apparatus, called the Erlange Sphygmomanometer, has been perfected for the purpose of measuring the systolic and diastolic blood pressure in man. If you have been out of school as long as the writer you have probably forgotten the difference between the systolae and diastolae. The systolic pressure is the blood pressure during the contraction of the left ventricle; the diastolic pressure is the blood pressure during the expansion of the left ventricle. That you may get a better idea of the appliance, here is an illustration.

Finally I bowed before Dudgeon's Sphygmograph, which is applied to the human wrist and records the character of the pulse, which means the character of the blood current as it nears the extremities.

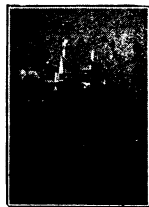


SPHYGMOMANOMETER.

Dr. Dreyer was most considerate while explaining the purposes of these appliances and I did my best to remember, but when I left, and all the way home, my brain was a-jumble of -mographs and -mometers, and I was uncertain whether I was holding the wrist of a dog or noting the respiration of a man. To save you this confusion, the details of each appliance will be described as it is used.

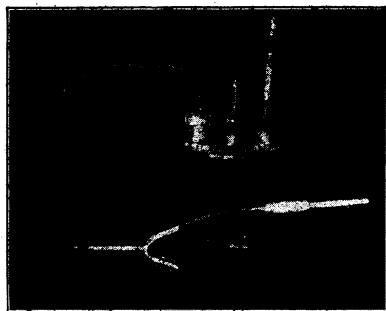
It was decided to begin the course with experiments in the effects

of somnoform, which is a comparatively new anaesthetic, composed of ethyl chloride 60 per cent, methyl chloride 35 per cent, and ethyl bromide 5 per cent, and as the first patients were to be dogs our first task was to make an inhaler which would permit proper administration. Owing to the differences of formation between the canine face and the human face, this proved a task of no slight difficulty. The first inhaler



SPHYGMOGRAPH.

consisted of a respiration bottle; with valves attached for controlling the flow of air in one direction.



RESPIRATION BOTTLE.

As this proved unsatisfactory, a face piece was made with plaster of paris. The animals took to the anesthetic from this face piece as children take to Castoria. They barked for more, and the more we gave the louder the animal barked. At last, with the aid of the tin-smith, we evolved a suitable face-piece, by which the air could be excluded. In illustration 5 the regular inhaler and our modifications are shown.

When we had gotten so far our greatest difficulties seemed conquered and we entered on the experiments proper. For fear of making this paper too long, the accounts of these will be deferred till next month, save the report from one extensive experiment to determine the value of using a rapid acting anesthetic to precede ether or chloroform.

On each of eight tables was a dog on which an operation on the recurrent laryngeal nerve was to be conducted. These operations were identical. At table No. 1 the anesthesia was started and completed with chloroform. At table No. 2 the anesthesia was begun with somnoform and changed to chloroform. At table No. 3 anesthesia begun with somnoform and completed with ether. So on to and including table No. 8, beginning with somnoform and completing with chloroform or ether. All the operations at tables Nos. 2 to 8, that is all in which the anesthesia was begun with somnoform, were completed before the operation at table No. 1, where the anesthesia was wholly by



SOMNOFORM INHALER.

chloroform. In fact, the writer had anesthetised the seven dogs on tables 2 to 8, inclusive, going from one to the other, and the operation at Table No. 8, the last dog anesthetised, was completed ten minutes before that at table No. 1.

During our later experiments many interesting and valuable records were obtained. These are now being transcribed and will appear in future numbers of this magazine.

(To be continued.)

OFFICE AND ASSISTANT.

BY EMMA A. WEISGERBER.

Being an assistant in an office for the past eight years and having read so many articles in dental journals of office management and assistants, I have been impressed with the fact that few dentists derive the benefit they should from an assistant and that I should like to relate some of her duties in the office.

In the first place, if she be a success, she must or should know the business thoroughly and have a deep interest in the affairs of the office. She should be loyal to her employer and in turn should be treated with the greatest kindness and respect and her work should never be allowed to become a burden to her. Her training is due to her employer and if she fulfills her position properly she will be very busy during working hours, but, as I have said before, too much must not be asked of her. I refer to the young lady assistant, a non-graduate in dentistry, who is fairly well educated, can write a good hand and who has the very highest respect for the profession.

Now, I will speak of some of the uses to which she may be put by good training. She will be useful at the chair during operations, in the laboratory, at the desk taking care of the books or at the typewriter with correspondence. She must know the importance of dental hygiene and sterilization.

I will now begin with her duties on a busy day in the office. The first thing in the morning she looks after the oiling of the engine, sees that all the soiled linen about the chair is replaced with clean, that the fountain-spittoon is in good condition, a clean glass with fresh water for patient is there and also one for fresh water for the bulb syringe. The patient on entering the office is met by the assistant and taken into the operating room, where the comforts of the patient are looked after by her. While the doctor is preparing himself for the operation she sees that all is in readiness about the chair.

If the patient's mouth is to be examined, she gets the tablet containing blank examination diagrams and proceeds to mark out all work to be done to get the mouth in a healthy condition. It may be well to add here that the assistant should be acquainted with dental nomenclature as it is given her in outlining the work. Then if the teeth are to be cleaned at this sitting, she puts the scalers on the operating

table and while the scaling is being done sees that the patient is constantly provided with fresh water to which a little antiseptic has been added. Then a mandrel mounted with a brush, leather point or rubber cup is put on the hand-piece and a small glass dish with pumice mixed with peroxide and a few drops of Sanitol, Borolyptol or any good mouth-wash is placed on the table.

Well, here are a few minutes when the assistant is not needed at the chair, so she may slip into the laboratory if she has work there; if not, she is at the desk posting books, rolling gold foil or attending to some correspondence. The desk is in the operating room, and so if needed at the chair, is there at a moment's notice. As soon as the patient is dismissed from the chair, the assistant is there to take care of every instrument used during the operation. They are all placed in an antiseptic solution and dried with an antiseptic napkin, which is not washed, but thrown away. Then she turns to the patient, who by this time is probably ready to leave the office, and makes further appointments if needed. She then gets the day-book and makes the record and charges. Then linen, glasses, etc., about the chair are replaced with clean ones ready for the next patient.

If the next operation is one of filling, the assistant gets the dam, clamp, floss-silk, etc., in readiness. If the doctor should be detained at something for a few minutes, she may put on the rubber, fasten back the edges, adjust the saliva ejector, place a napkin to protect patient's lips and chin from contact of rubber and attend to all the accessories. She may then warm the chip-blower, wipe off the teeth twice with alcohol and dry them with warm air. When the operator begins, if quick to perceive, she can get out most of the instruments needed for the preparation of the cavity. During the operation she is always ready to use the chip-blower and get the needed medicine bottles. If it be an amalgam filling, she will, in looking at the size of the cavity, judge the amount or parts of material it will require to fill it; then mixes it also, putting the necessary pluggers, burnishers, etc., on the table. When the operator is ready for the filling material she separates small pieces of it at a time and with a pair of pliers (which are for her use only) she places them into the cavity. While the doctor is putting the finishing touches to the filling she replaces the medicine bottles from the table to the case. In removing the dam she should be ready to help remove all the accessories and take charge of the wet dam, also removing towel from patient, etc.

If a gold filling is to be made she places the gold tray and hand mallet on the table, and if she is familiar with the operator's methods she knows just about what line of gold pluggers are needed. When the doctor is ready for the gold she anneals it (with her pliers) and places it in the cavity. In all these things it is seldom necessary for the operator to tell her what to do, for a simple nod of the head will tell her that he is ready for the malleting. In case a stronger blow is needed during the malleting a positive nod of the doctor's head or more firmly placing the plugger will tell her just what is needed at that moment. When the filling is packed and while the operator is using the burnisher she gets disks and strips at hand, putting a little vaseline on them to prevent friction. She holds the rubber well away while they are being used to keep it from being caught in the engine. Then again, when it comes to removing the dam she is ready to take care of it as well as the holders, napkins, etc. If the filling is too full she is there with the syringe to throw a small stream of water over the stone while it is being ground down.

Now if a cement filling is to be made, while the operator is preparing the cavity she gets out the proper shade of cement to be used and when he is ready for the material mixes it and places it in the cavity. So it is with treatment cases; she places medicines on the table, hands the warmed gutta percha to him as well as the burnisher. She will be found useful in mixing impression materials, warming wax for bites, separating models, polishing bridges, crowns, plates, selecting teeth, making regulating models, and in fact can lessen the work of the operator nearly one-half.

Then she should stand between the operator and the many interruptions. If the telephone calls she answers it and in most cases it will be found that it is not necessary for the doctor to leave the chair. Regarding agents and others who wish to "see the doctor just a moment" but who do not want to see him professionally, they must give their card or let their business be known to the assistant. If the doctor is interested he will make an appointment to see him later when he is not busy. Usually the assistant can detect their business the moment they appear.

If two chairs are in the office it will be found a great aid on busy days, as a great many patients who come in without appointment require immediate attention. Often the assistant, with careful and judicious training, can do some of the minor operations. In some

cases she can be taught to remove tartar, polish all surfaces of the teeth, massage the gums, treat the diseases of the mouth, take care of aching teeth with the most satisfactory results.

Then as to the stock—it should be her duty to see that there is no running out of anything at the wrong minute. If she keeps a small “want book” in which she places daily such articles as will need to be ordered and then make out the order for these articles at some leisure time before the day is over, there will be no running short of anything when needed most.

With these numerous duties that she has been given to do there are still many odd minutes when she is free to do other things, such as desk work, etc. Now, I have aimed to outline some of her duties as a “busy” assistant, and which, if the operator be free from, will enable him to give all his time and attention to his work as well as the most efficient service to his patients. I may have gone too much into detail in writing this article, but I believe it is a subject that could furnish a very much longer paper.

CATARRHAL DISEASES OF THE NASO-PHARYNX.

BY H. M. MARSH, M. D., AUBURN, KY.

As the season is now fast approaching when this class of diseases take up most of the physician's time and is the cause of more suffering among more people than almost all other diseases combined, I wish to say something in regard to a simple and effective treatment of this class of diseases. In this climate this is the commonest of all diseases, there being very few who do not suffer from it in some of its various forms. Chronic nasal catarrh is in most cases a result of repeated attacks of acute catarrh or “common colds.” In this short article it is not necessary to go into details or take up time or space with causes and symptoms; everyone is familiar with them. My object here is to simply give my plan of treatment plain and simple, yet eminently successful. In the treatment of these cases every physician is well aware of the fact that cleanliness is in most cases all that is necessary for a cure. Every physician also knows that in order to have a perfect cleansing agent it must be both alkaline and antiseptic. My success in treating these diseases, viz., acute and chronic nasal catarrh, including ozena, acute and chronic tonsillitis, pharyn-

gitis, catarrhal deafness, etc., has been due almost entirely to the systematic and thorough cleansing of the mucous surface with Glyco-Thymoline. I have been using this ideal alkaline antiseptic in my practice for years and have never been disappointed in it.

THE WORM TURNETH.

The editor has been afforded, by chance, as it were, an opportunity of becoming acquainted with a unique method in use by one of the profession in Chicago.

This dentist, becoming weary of meeting on the streets and in cars some of his patients who have owed him money for, say, five years, and weary of receiving from them naught save sizzling smiles, some time ago adopted the following form which he uses in these cases and which, he says, affords some subjective relief—some balm to the ravished dental soul:

OFFICE OF DR. _____

DENTIST.

CHICAGO, _____ 19—

From time to time, as it appears to be expedient, to some of his clientele, Dr. _____ has the honor to send, properly filled out according to the occasion, this

NOTICE

and in accordance with this custom, therefore, be it known to Mr. _____ that as h— bill of \$— for services rendered _____, (statement of which having issued from this office), has been due since _____, 19—, and is still unpaid, the undersigned sends to h— this greeting.

Whether the aforementioned failure to pay this debt is due to dishonesty, to inability to pay or to mere indifference, or whether the services rendered have not been satisfactory and of value, all of which being best known to the debtor, and notwithstanding which of these may be true, the undersigned does hereby grant to the said debtor full and complete absolution from this obligation and to his heirs and assigns and does also herein involve his own and to the end that though the debt be just or not it shall no longer stand nor hold against h— and that the services aforementioned are now hereby presented as a free and charitable gift and that henceforth, by virtue of this notice, Mr. _____ of the aforementioned account owes him nothing.

Respectfully. (Signed) _____

REPORT OF THE SAN FRANCISCO DENTAL RELIEF COMMITTEE.

To the National Dental Association, and to Dentists, Dental Supply Dealers and Others Who Contributed to the Relief of the Stricken Dentists of California.

DEAR FRIENDS:

On April 18, 1906, the city of San Francisco was overwhelmed with the greatest double disaster of earthquake and fire that has ever been visited upon any city in the history of the world and which resulted in the death of several hundred persons and in a property loss of over \$300,000,000.

Our profession was severely afflicted by this catastrophe, two deaths having been recorded as the direct result of the earthquake, Dr. C. L. McPike of San Francisco and Dr. Warren de Crow of San Jose, and out of 559 dental practitioners in San Francisco over 500 were burned out, losing their entire professional outfits and many their homes as well.

The days of the earthquake and the fire and those immediately following were dark days indeed to the people of San Francisco, but the energy and dispatch with which the entire country responded so generously to our cry for help will never be forgotten by our then crushed and destitute people. Provisions, clothing and money came pouring into the city while the flames were still devouring the business property and the homes of our citizens, and but for this timely assistance the suffering from the pangs of hunger and cold would have been much greater than they were. Destitution at this time was so great that many of our own profession were by their necessities compelled to enter the bread line, while others were forced to live for several days and weeks in the refugee camps.

Our people were, however, possessed with a superb courage which arose above the depressing influences of their surroundings and they soon began to plan for the rebuilding of the city and rehabilitating their business.

The members of our own profession were at first greatly discouraged over the prospects of re-establishing their practice, as their clientele were scattered to the four winds of the earth. More than 250,000 people left the city during the first week following the disas-

ter, which made the prospects of earning a living along professional lines look very dubious indeed. As a result of this many dentists abandoned their profession and went to work at anything that would furnish a sufficient income to keep the wolf of want from the door. Some even became day laborers, shipping clerks, teamsters, etc.

It was not necessary for the dentists of San Francisco to send out a special plea for help from the fact that before they had time to think of asking for such assistance money began coming in by telegraph, being sent to the undersigned committee, which was appointed by the Chicago dentists and dealers and afterward ratified by the dentists of other cities and by the Executive Council of the National Dental Association.

The committee began its relief work immediately after the receipt of the first donation, \$2,000, which came forth from Chicago and reached us on April 25. Notices were placed in the newspapers stating that a dentists' relief committee had been appointed and that money was being forwarded from the dentists and dealers of the country for the relief of members of the profession, dealers and their employees who were in need of financial assistance. At the second meeting of the committee it was resolved that inasmuch as nearly every dentist in San Francisco had suffered considerable loss by the disaster and that many of them were left entirely destitute, the sum given to each member would of necessity have to be small, as we had no idea how much would be contributed by the profession for this purpose. It was, therefore, decided that we would not be justified at this stage of our work to give to any individual a larger sum than \$20 except in urgent cases of need caused by sickness, death, etc., and that in as far as possible this money be given for instruments with which the recipient could begin to do a little practice. At this stage of our work the dental dealers of San Francisco agreed to accept our order of \$20 upon them for instruments at a face value of \$27; in other words, they agreed to sell \$27 worth of instruments for \$20, which was practically wholesale price. Later, when more money had been received, we sent out word that a second sum of \$20 was available for such as needed further relief. Many never applied for second relief, hence a surplus was left in our hands to be disposed of.

For a time your committee held weekly meetings, later bi-weekly

and then, as the demands upon their time became less, they met but once each month. For the last four months there have been practically no requests for assistance and the work of the committee would have been closed soon after the beginning of the new year but for the illness of the chairman.

On April 13, 1907, the committee met for the last time and after auditing the accounts of the treasurer ordered his report to be printed in the dental journals, a copy of the complete report to be forwarded to each of them with a request that it be printed in the June issue of their journal.

The following preamble and resolution was then passed by a unanimous vote of the members of the committee present at this meeting:

"Whereas, There is left in the hands of the San Francisco Dental Relief Committee the sum of \$3,967.75 after having discharged our duties to the best of our ability in relieving the distress of the dental profession caused by the April disaster, and there being no further urgent need of the money in connection with the relief work, therefore be it

Resolved, That the balance of the money now in our hands be turned over to the National Dental Association to be used as a nucleus for a national relief fund. The same to be invested in securities which can be quickly realized upon in case of necessity, the interest of which may be employed for the use of worthy superannuated dentists and the principal available for the relief of dentists who may suffer from any calamity such as flood, earthquake or fire."

Appended below is the report of the treasurer. From this report it will be seen that the only expenses incurred by the committee were for necessary clerical help, newspaper advertising, printing, stationery and postage.

In passing the preceding resolutions which establishes a fund for the worthy superannuated dentists, it is earnestly hoped that the profession would become interested in increasing the fund until it shall reach a sum of not less than \$50,000. No more worthy object can engage the attention of the profession than that of providing for the worthy members of our profession, who by misfortune coming to themselves or others in their declining years are cast upon the charity of a sometimes cold and unfeeling world.

Bauer, C. F.....	20.00	Clarke, J. P.....	20.00
Bean, G. L.....	20.00	Clay, E. A.....	20.00
Benjamin, E. H.....	20.00	Clay, L. E.....	20.00
Bergstrom, G.....	20.00	Clement, C. E.....	20.00
Bibbero, G.....	20.00	Clendinin, E. C.....	20.00
Briggs, J. A.....	20.00	Clevinger, Irma.....	10.00
Blake, A. E.....	20.00	Cochrane, E. O.....	20.00
Bliss, F. A.....	20.00	Cohn, Harry A.....	20.00
Bliss, F. A.....	20.00	Coke, P. S.....	20.00
Block, S. D.....	20.00	Colburn, A. G.....	20.00
Blondin, L. D.....	20.00	Colburn, O. M.....	20.00
Boesch, M. S.....	20.00	Colligan, F. J.....	20.00
Borgen, J. N.....	20.00	Compton, George T.....	20.00
Bostwick, E. C.....	20.00	Coney, D. M.....	20.00
Bowman, A. G.....	20.00	Coney, Z. T.....	20.00
Bowman, A. G.....	37.50	Cooke, N.....	20.00
Bowman, C. H.....	20.00	Corliss, W. B.....	20.00
Boynton, G. D.....	20.00	Craig, Homer T.....	20.00
Brasch, S. L.....	20.00	Craigie, H.....	20.00
Bray, Geo.....	20.00	Cranz, L. T.....	20.00
Brecenridge, A. J.....	20.00	Crawford, E. H.....	20.00
Brewer, B. B.....	20.00	Creagh, J. W.....	20.00
Broad, E. J.....	20.00	Cree, W. A.....	20.00
Brooks, J. A.....	20.00	Criswell, R. B.....	20.00
Brown, A. A.....	20.00	Criswell, Helen C.....	20.00
Brown, Albert.....	20.00	Cummings, J. E.....	20.00
Brown, A. V.....	20.00	Cunningham, S. J.....	20.00
Brown, C. D.....	20.00	Curless, J. H.....	20.00
Brown, M. A.....	20.00	Curtiss, F. A.....	20.00
Browning, W. F.....	20.00	Cushing, R.....	20.00
Brun, L. E.....	20.00		
Bullock, W. M.....	20.00	Daley, H. T.....	20.00
Burke, Ivan C.....	20.00	Danziger, C. A.....	20.00
Burns, O. B.....	20.00	Darneal, M. E.....	20.00
Burns, Robert, Jr.....	20.00	Dasher, D. D.....	20.00
Bush, Ferdinand.....	20.00	Davis, W. E.....	20.00
Byrne, D. W.....	20.00	Davis, H. S.....	20.00
		Davis, W. L.....	20.00
Callender, M. L.....	20.00	Davis, H. P.....	20.00
Calliman, A. W.....	20.00	Day, R. A.....	20.00
Cane, Alfred.....	20.00	Decker, C. W.....	20.00
Carew, J. A.....	20.00	Dennis, S. W.....	20.00
Carr, J. D.....	20.00	Dennis, S. W.....	100.00
Carroll, J. C.....	20.00	Derby, A. T.....	20.00
Carroll, J. M.....	20.00	Devlin, C. A.....	20.00
Casey, T. F.....	20.00	Donohue, S. T.....	20.00
Castle, R. R.....	20.00	Downes, Ernest.....	20.00
Couch, F. L.....	20.00	Driscoll, J. J.....	20.00
Cavalsky, V.....	20.00	Drucker, G. I.....	20.00
Chapman, Ira M.....	20.00	Duckett, C. S.....	20.00
Chase, G. M.....	20.00	Duggan, N. S.....	20.00
Chin, Arthur.....	20.00	Durgan, F. L.....	20.00
Chisholm, A. A.....	20.00	Dunbar, P. H.....	20.00
Chismore, H. J.....	20.00	Dunn, F. J.....	20.00

Dunn, Robert	20.00	Gruss, F. J.....	20.00
Dye, F. M.....	20.00	Gruttner, A. T.....	20.00
Dyer, E. C.....	20.00	Hackett, A. E.....	20.00
Eason, J. A.....	20.00	Hackett, A. B.....	20.00
Easton, S. F. W.....	20.00	Hackett, F. M.....	20.00
Edwards, D. P.....	20.00	Hale, R. L.....	20.00
Eidenmuller, F. H.....	20.00	Halem, C. A.....	20.00
Eisen, E. G.....	20.00	Haley, G. W.....	20.00
Elberg, H. M.....	20.00	Hall, S. H.....	20.00
Elworthy, F. W.....	20.00	Halsted, J. L.....	20.00
Epsteen, H.....	20.00	Hanson, W. A.....	20.00
Everton, C. M.....	20.00	Hanson, H. P.....	20.00
Everton, C. W.....	20.00	Hardcastle, George	20.00
Farley, R. E.....	20.00	Harnden, F. W.....	20.00
Farmer, C. G.....	20.00	Harris, G. R.....	20.00
Ferguson, T. H.....	20.00	Harris, I. D.....	20.00
Fischer, F.....	20.00	Harvey, C. L.....	20.00
Fisher, G. N.....	20.00	Harvey, W. H.....	20.00
Fitzpatrick, M. G.....	20.00	Hasslinger, O. A.....	20.00
Flood, A. M.....	20.00	Hauselt, C. P.....	20.00
Florentine, E. J.....	20.00	Heacock, F. T.....	20.00
Floreys, W. D.....	20.00	Heaney, W. P.....	20.00
Fogarty, J. D.....	20.00	Hebard, Miss R.....	10.00
Ford, A. J.....	20.00	Hein, G. N.....	20.00
Forester, C. O.....	20.00	Heine, J.....	20.00
Fowler, A. A.....	20.00	Heller, L. C.....	20.00
Fowler, W. S.....	20.00	Hermes, F. W.....	20.00
Fox, J. B.....	20.00	Herrington, W. M.....	20.00
Fox, J. M.....	20.00	Heyn, Edw.....	20.00
Fratrus, M. E.....	20.00	Higgins, R. M.....	20.00
Frazier, T. J.....	20.00	Higgins, T. S.....	20.00
Frederick, H. A.....	20.00	Hill, Albert B.....	20.00
Fugler, C. A.....	20.00	Hill, A. L.....	20.00
Gabbs, M. F.....	20.00	Hill, Alfred S.....	20.00
Galeoto, S. E.....	20.00	Hocker, J. M.....	20.00
Gallagher, C. V.....	20.00	Hocker, T. L.....	20.00
Gambitz, H. R.....	20.00	Hofer, C. A.....	20.00
Gambitz, L. R.....	20.00	Hoffer, V.....	20.00
Gaskill, P. D.....	20.00	Hoffman, B. J.....	20.00
Gedge, H. E.....	20.00	Hooper, Harry.....	20.00
Gilbert, C. C.....	20.00	Howard, A. J.....	20.00
Gilmore, A. W.....	20.00	Hubbard, Geo. A.....	20.00
Ginro, J. W.....	20.00	Hubbell, A. B.....	20.00
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ABSTRACTS AND SELECTIONS

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There are many diseases of the mouth—so many, indeed, that it would be impossible to more than call attention to them, did I attempt to include all in one paper. I desire, however, to call your attention to a considerable number of them, and in order to do this must present each very briefly and not attempt to go into great detail either as to pathology or treatment. Many dentists seem to entertain the idea that their sole professional function is to seek out, in examining the mouth, only such pathological conditions as are connected with the teeth, often ignoring much more serious diseases. The mouth is the legitimate field of the dentist, and he does not fulfill his entire duty to his patients unless he becomes familiar with all diseases of the mouth and looks for deviations from the normal whenever he examines his patients' mouths. There are certain neoplasms which, if found in their incipency, may be removed and the patient relieved of a condition which, had it been allowed to progress, would have cost him his life. The dentist's opportunity for the good of his patient's welfare, so far as his mouth is concerned, is much better than that of the general practitioner, since he sees the mouths of his patrons at frequent intervals and can often detect disease before the patient is aware that there is any deviation from the normal. He would not consult his physician until he was aware of a pathological condition, which might be too late.

The anticipation that the younger men of our *alma mater* may be stimulated to greater observations and study in this direction prompts the presentation of this subject.

*Read before the Alumni Association of the Dental Department of Washington University (Missouri Dental College), St. Louis, Mo.

STOMATITIS.

A common name for a number of the diseases of the mouth is stomatitis. It is a word that has been overworked in the past, as it has but slight significance, meaning simply an inflammation of the mouth. As a prefix it may be employed with some degree of convenience, but it has slight value otherwise.

CANKER SORES.

One of the most common diseases of the mouth which have no connection with the teeth are certain ulcers found on the gums and cheeks. These ulcers when first seen are depressions of considerable depth, usually appearing singly, but occasionally multiple. They appear most commonly at the duplicature or juncture of the mucosa of the cheek with the gums. They vary in size from one-eighth to one-quarter of an inch in diameter, usually somewhat circular in form, with well-defined congested margins and filled in with debris of a dark color. On removal of this covering there is exposed a raw surface which is very sensitive to the touch, but does not bleed easily. The common name for these ulcers is canker sores. By some pathologists they are supposed to be of herpetic origin, resulting in a limited necrosis of the mucosa. Others suppose them to be caused by some specific organism which was present in the mouth when a slight injury of the mucosa permitted their entrance into the tissues. Still others think them due to gastro-intestinal disturbances.

ACUTE ULCEROUS GINGIVITIS.*

Acute ulcerous gingivitis is a disease seen but rarely, and has not, so far as I am able to discover, been previously described other than by myself. The onset of the disease is sudden. The earliest symptoms are indicated by a slight malaise, which is quickly followed by rapid ulceration, at first confined to the gingivæ, usually about two or three of the anterior teeth on both jaws simultaneously, and in corresponding localities; later it is extended to the gums about a number of the teeth or groups of teeth, but rarely if ever does it include the entire gum margin. The lingual margins and festoons of the gums do not participate at first in the inflammatory processes,

*Report by writer in *Dental Review*, May, 1906.

but later the festoons are destroyed and deep pockets are formed in the interproximal spaces. Still later the lingual gingivæ participate, but in no case have I seen ulcerous manifestations in this locality. In twenty-four hours after the patient's attention has been called to the condition of his gums the parts attacked present the appearance of having been gnawed away until most of the gum tissue overlying the alveolar process immediately adjoining the teeth has been destroyed. The part of the gum attacked has soft, thickened, and in some instances everted margins. The eroded parts form pockets which are filled in with a grayish, pasty mass, similar to that found in syphilitic ulcers in the mouth. When this mass is removed a granulating surface is exposed, which bleeds easily and is very painful to the touch. The mucosa for a short distance from the ulcerative margins is of a dark red hue, as a result of the congestion. The gum covering the cervical and interproximal surfaces of the teeth is destroyed sufficiently in some cases to uncover the teeth down to the alveolar border.

The breath of the patient is fetid, the saliva ropy and in excess of the normal. The temperature in the early stages of the disease ranges at about 101 degrees. The patient is nervous and anxious, the appetite is poor, sleep is disturbed, the bowels are constipated. Bloody saliva escapes from the mouth during sleep, staining the pillow.

Without treatment the ulceration does not appear to extend beyond the gingival border of the gums nor deeper than the alveolar process, but when the case is neglected the entire mucosa of the mouth, in a degree, participates in the disease—that is, to the extent of becoming red and tender. The ulceration seems to be limited to the areas indicated, and after the destruction of the mature tissue has ceased the granulations only appear to be destroyed, leaving the pasty mass covering.

The submaxillary lymphatics become involved early in the disease. Macroscopically no pus is observed, but the microscope shows pus cells in abundance.

It is not necessarily a disease of the poor or those of impaired vitality; it is not confined to those who are careless of oral hygiene; neither is it traceable to metallic poisons, syphilis or renal disease.

MUCIPAROUS CYSTS.

Muciparous cysts are found principally on the lips, but may be seen on the cheeks and on the floor of the mouth. These cysts appear suddenly as blebs, and when opened a clear mucus is discharged. They are formed by pent-up mucus from the mucous glands, the ducts of which have become occluded by injury or otherwise. These are innocent little affairs, but frequently cause some inconvenience to the patient; they also frequently cause him alarm.

RANULA.

Ranula is a tumor on the floor of the mouth, in form supposed to resemble the belly of a frog. It is sometimes as large or larger than a hickory nut, and has much the physical appearance of the muciparous cyst, except that it is much larger. Formerly ranula was supposed to be caused by stenosis of a salivary duct or by occlusion of the mouth of a duct, but more recent observations indicate that it has no connection with the salivary glands or ducts, but results from closure of the duct from some one of the mucous glands in the floor of the mouth, or the gland of the Bland and Nuhre, under the surface of the tongue.

STENOSIS OF THE SALIVARY DUCTS.

To differentiate between a stenosis of the salivary ducts and ranula, it is only necessary for the patient to observe on eating if either the sublingual or submaxillary salivary gland enlarges and becomes painful. If there is no enlargement of these glands under such circumstances, then we may conclude that the disease is located in the mucous glands before mentioned. I doubt if we ever have such entire stenosis of the salivary ducts as to cause complete stoppage of the flow of saliva, though we often see a partial closure of Wharton's duct sufficient to prevent its ready flow, with enlargement of the submaxillary gland. From my experience this condition does not result in the large tumors on the floor of the mouth, such as is formed from stoppage of the ducts from the mucous glands. Partial obstruction in the salivary ducts may be caused by an interstitial inflammation in the walls of the ducts, producing thickening and induration; or by deposition of calculus in the lumen of the duct and by injuries of the duct's outlet. The latter is often caused by biting the cheek at the point where the duct of Stenson opens, or by its irritation by sharp edges on a molar tooth. There is no surgical inter-

ference which benefits when the entire duct has become indurated and lessened in caliber by an interstitial inflammation. In time, with palliative treatment, there is a subsidence of the inflammation, with dilatation of the canal, so that there is sufficient caliber in the duct to permit the accumulated saliva to flow out without disturbances.

STONES IN THE DUCTS.

Very rarely do calcareous deposits in the ducts materially obstruct the discharge of the saliva unless they cause an inflammation. If the concretion has a smooth surface, I am of the opinion that it rarely causes trouble in this way. However, I have seen a few cases in which the stones were rough, giving rise to an inflammation of the duct which extended back to the gland, causing a purulent supuration. On the removal of the stones in these cases I found them covered with spines, and to these rough surfaces was the inflammation due. All of the stones I have found have been in Wharton's duct. Generally they have been about midway between the gland and the opening of the duct. Frequently such stones are sufficiently large that they may be discovered by palpation, but a more certain diagnosis may be made by passing a small probe into the duct, when, if calcareous matter be encountered, its presence is easily determined by the sensation received by the fingers through the probe. Radiographs may also be employed as an aid to diagnosis. As a precautionary measure, all stones of whatever nature should be removed.

NOMA.

Noma is a comparatively rare disease, principally of childhood, sometimes called gangrenous stomatitis or cancerum oris. It is an affection of the skin or mucous membrane of the cheeks. A sloughing ulcer forms near the commissure of the lips, on the inside or outside of the cheek, involving, perhaps, the entire thickness of the cheek. Rapid necrosis is a result. Intense septic infection follows, with the usual train of symptoms. The disease is frequently fatal.

SYPHILIS.

Primary syphilis of the mouth is uncommon, though chancre is sometimes seen on the lips, and less frequently on the tip of the tongue. If on the lip, it may be caused by infected drinking cups, spoons, knives and forks, by kissing, and, I fear, sometimes by in-

fect ed dental instruments. Chancre of the lip at first appears as a small, red papule; later it ulcerates and the parts about it become indurated. There is little or no pain. The ulcer following is covered with a grayish, pasty mass which is discharged from it. The submaxillary and sublingual glands become enlarged, but do not often suppurate. During the secondary stages of the disease mucous patches appear in the mouth, on the tongue, the soft palate, lips and inside the cheek. These ulcers have well-defined margins and are of considerable depth and contain the grayish, pasty mass before mentioned. The tertiary symptoms appear in the mouth as gummata and ulcerations. Necrosis of the palate and nasal bones as a result is common; the soft palate is sometimes wholly destroyed. All physicians having syphilitic patients should inform the patient's dentist, either personally or through the patient, should the patient's teeth need treatment, in order that the dentist may not infect himself and that he may be the more careful in the disinfection of his instruments after treating such patients, that others may not become infected. We owe it to our patrons that the greatest care be taken of our instruments to keep them sterile at all times, in order that we may not transmit disease. We should always beware of suspicious sores or ulcers about the mouth and lips. If a sore about the mouth having a resemblance to chancre or secondary indication of syphilis be observed, the patient should at once be referred to the family physician for positive diagnosis and treatment. Syphilitic sores on the lips or tongue can be mistaken only for lupus or epithelial cancer, and in some cases specific treatment or the microscope, or both, can only be relied upon for positive diagnosis.

LEUCOPLAKIA.

Leucoplakia is occasionally found in the mouth. It is found on the sides of the tongue, on the buccal mucous membrane and on the buccal aspect of the gums. I have seen a number of cases of leucoplakia, and in almost every instance have found, as others, a history of syphilis, or have found the patient to have been an excessive smoker, or both. The sequel of leucoplakia is carcinoma; therefore it must be recognized as a dangerous condition; prompt and early treatment is demanded. The appearance of leucoplakia patches can not be mistaken. The epithelium composing these patches is very white and

shiny; other than this there is no evidence of disease. The patient is frequently unaware of his condition until his attention is called to it, as there is no pain, soreness or enlargement.

LUPUS.

Lupus is a tubercular disease of the skin, and is sometimes found in the mouth, on the tongue and on the cheeks. It may originate in the mouth and extend outward, or extend from the skin of the cheeks, outside, into the mouth. Lupus of the tongue forms deep ulcers with ragged edges, filled in with a grayish-white layer. These ulcers excavate underneath the margins of the ulcer for a considerable distance. The appearance of these ulcers is quite different from those caused by syphilis. Surrounding tubercular ulcers in the mouth there is little or no induration of adjoining tissue and the margins are not so well defined and sharp as in syphilis. The microscope differentiates it from carcinoma, and the absence of submaxillary buboes contraindicates syphilis. This form of tuberculosis is generally amenable to X-ray treatment, as is leucoplakia.

ACTINOMYCOSIS.

Actinomycosis is much more commonly found in the mouth than elsewhere. Out of 383 cases reported as appearing in man, 215 of these were found in the mouth (McArthur). Secondarily the disease appears on the neck and on the side of the face. This disease, when it attacks horses or cattle, is known as lumpy jaw. The fungus causing the disease comes from the grains, chaff and straw of wheat, barley, oats and other cereals. It first appears as a nodular body or growth; this breaks down and an ulcer forms. From these there may be expressed, in most cases, sulphur-like granules, which under the microscope show the characteristic ray fungus. On the side of the neck, in the secondary infection, the skin is thrown into folds, and from minute sinuses there may be expressed these characteristic granules. The fungus finds access to the tissue through decayed teeth, pyorrhea pockets and the follicles of the tonsils. It destroys the alveolar process, but rarely the bone proper.

GONORRHEA.

Gonorrhea is occasionally seen in the mouth. The mucosa of the mouth presents the appearance of multiple small blisters, with desquamation of the epithelial covering and with a milky-appearing exudate.

The mucosa is extremely tender to the touch, the patient eats with difficulty, the breath is offensive, the temperature is above normal and the patient has much physical discomfort. The sublingual and submaxillary lymphatics are early involved. The appearance of the mucosa is similar to that seen when there is a catarrhal inflammation of this tissue, but the gonococci differentiate it from this disease.

TUMORS OF THE MOUTH.

Tumors of the mouth may be benign, but clinical observation indicates that 86 per cent. of all new growths in the mouth are malignant or may become so. It is quite impossible to mention more than a very few of these, and these extremely briefly. Fibroma, sometimes known as spulis, is a fibroid tumor arising from the periosteum. It is found springing up between the teeth, forcing them apart, usually about the anterior teeth. It is pedunculated and sometimes grows to great size. It is thought by some that from irritation it may become malignant. It sometimes breaks down and ulcerates. If it is thoroughly removed early in its growth, together with all of the periosteum connected with it, and a part of the alveolar process, it does not return, but if it is only snipped off or cauterized off it will certainly return. To temporize with it is dangerous.

CARCINOMA.

Carcinoma and sarcoma are the two malignant growths of the mouth. Carcinoma occasionally attacks the tongue, but more frequently the lips and buccal mucosa. It may be caused by irritants, such as rough edges on the teeth, by a pipestem or other irritant constantly applied. It is three times more common with men than with women. Its early recognition and removal is important, since it is inclined to invade adjacent tissues. It begins with a hard nodule, which soon ulcerates, when it is very painful and gives out an offensive odor. The lymphatics are early involved. As before said, it is differentiated from lupus or syphilis by the microscope. Even when thoroughly removed, 75 per cent. recur, though the necessary precaution of removal of the lymphatics which drain the territory has been observed. Its origin may be in the lining of the maxillary sinus. In these cases it may invade the mouth through absorption of the buccal wall of the antrum and appear as a cauliflower protuberance; at the same time it may invade the nasal fossa in a similar appearing

growth. In such cases excision of at least one-half of the maxilla, with a thorough removal of all the lymphatics which perform police vigilance over the region, is the only hope for the patient. Carcinoma is generally a disease of the adult, not often appearing in those under forty years of age. The prognosis is more favorable in those cases where it attacks the lip, and then only when complete excision is done early.

SARCOMA.

Sarcoma is a growth springing from the connective tissue group. It is found in the mouth on the tongue, in the maxillary bones and the cheek. It is a disease more commonly found in the young, but attacks all ages. There are several varieties. The three general kinds are the giant cell, the spindle cell and the round cell, and the malignancy is in the same order. The giant cell is more commonly found in the lower jaw. If it is discovered in time and thoroughly removed the prognosis is favorable, since in this variety there is less tendency to secondary growths. The spindle-cell sarcoma is much more likely to invade remote parts through the lymphatics and the large veins. The round-cell sarcoma is the most malignant of the three varieties, and there is a greater tendency toward the production of secondary foci. Sarcoma is more frequently seen in the mandible than in the maxilla. On the upper jaw it may originate in the periosteum of the antrum of Highmore and enlarge the side of the face enormously, and finally, by absorption, find entrance to the mouth through the buccal wall of the sinus. It also projects itself into the nose, and occasionally elevates the orbital plate, causing protrusion of the eyeball. In some instances the alveolar process is depressed. Sarcoma may arise from tooth germs, from the periosteum under the gums, and from the medulary substance of the bone. Sarcoma of the jaws and carcinoma are not always clinically easily differentiated, and the microscope may be needed to solve the problem. Sarcoma originating in bone causes it to enlarge, but unless by pressure of the growth on the principal nerves, such as the inferior dental, it does not early in its progress cause pain, as does carcinoma. Sarcomatous growths do not involve the lymphatics until ulceration takes place, giving rise to a mixed infection; and when they do ulcerate there is a tendency to hemorrhage, since the blood vessels are more numerous and larger in

sarcoma than in carcinoma. One case of giant-cell sarcoma occurring in my practice originated in the mandible of a young girl about sixteen years of age. Instead of resection of the jaw, which is the usual custom, we removed the diseased part only, operating from within the mouth. We found all the anterior portion of the jaw except the alveolar process absorbed, it being replaced by cartilagenous tissue, which was easily removed by a gouge. We left the alveolar process and the teeth intact, which preserved the contour of the face to a considerable extent. Over two years have elapsed since the operation, and no signs of recurrence have been observed. It seems that we were justifiable in this case in preserving a part of the jaw intact rather than excising a large part of it, mutilating for life the face of the young girl, besides depriving her of proper masticatory apparatus.

DENTIGEROUS CYSTS, ODONTOMA AND EPITHELIAL CYSTS.

Dentigerous cysts, odontoma and epithelial cysts should never be mistaken for sarcoma, but sometimes they are, and excision of the jaw made. With the benefit to be derived from skiagraphs and the history in such cases, no such inexcusable mistakes should occur. These tumors are of slower growth than sarcoma or carcinoma, a fact which should be remembered and one which should aid in arriving at a differential diagnosis. These growths are found in both jaws, having their origin either in unerupted teeth, the dental follicle, or from the remains of parts of the dental epithelial cord which have not been completely atrophied; or, as in the case of the epithelial cysts, from inclusion of the epithelial cells by the tissues underneath. Such tumors are of slow growth, are not painful and do not usually suppurate.

NECROSIS.

Necrosis of the maxillary bones generally occurs as a result of infectious material from the teeth. Of this we do not touch upon, but it also has its origin from fumes of phosphorus, from traumatism, from exanthemata, from mercurilization and from syphilis. It is easily diagnosed, especially when a sequestrum is formed. The symptoms are: reddened, swollen gums, pus from sinuses about the teeth, fetor of the breath and induration of the overlying soft tissues; later, sinuses may be found on the face. Surgical interference is permissible only so far as it is necessary to establish and

maintain perfect drainage and the removal of sequestra when formed. Nature should be permitted to mark the line of demarkation when the sequestrum should be removed. The parts, in addition to thorough drainage, should be kept as nearly aseptic as possible. If these precautions be observed, new bone will take the place of that lost if the part attacked be the lower jaw, and but slight deformity will result. Necrosis of the upper jaw is rarely seen except as a result of trauma or syphilis, and the bone here destroyed is rarely reproduced.—*Dental Era*.

THE COLOR PROBLEM.

ABSTRACT OF PAPER READ BEFORE THE IOWA STATE DENTAL SOCIETY,
MAY, 1907.

Dr. J. L. Byrum of Indianapolis gave an instructive lecture on porcelain inlays and a "talk," he called it, on some phenomena of color formation in porcelain work.

We would like the opportunity of telling the "Dr." that a "talk" showing such thought and study should certainly be classified as a "lecture."

It was all illustrated with charts, being explained and pointed to in detail as the subject proceeded.

He started out with the definition of *color*, which is, concisely, "a sensation produced by the action of light on the retina."

Break any ray of light into atoms and different lights will result. Inlays are different in artificial lights. *Black* being an *absence* of color and *white* not *absorbing* light, are two things to be kept clearly in mind.

In studying bodies there are three kinds of light to be considered—transparent, translucent and opaque. Thicknesses of inlays must be considered in getting *color* as well as number of layers. He showed how *transparent* bodies tend to become *translucent* if made thick enough; translucent bodies tend to become *opaque* by increasing thickness. *Inversely is true*. There was also in this connection the refraction of light and *shadows*, which must be considered. *Refraction* of light being a changing course of its rays and shadows being the exclusion of light by the mouth.

The Sir David Brewster theory was given us tersely. Red, yellow and blue being all the primary colors. Red and yellow produce orange. Blue and yellow produce green. Blue and red produce violet. Tints being made by adding white and shades by the addition of black. *Hues* by mixing primary colors in varying proportions. Tints by diluting the color or their hues with white. He considered three qualities of color—hue, purity and luminosity. *Hue* is the chief quality by which one color differs from another. Purity, the absence of admixture of any other color, or black or white. Luminosity, the strength of light sent to the eye by any color. The *most* luminous color is yellow, the *least* is violet.

The composition of teeth as related to individual character was another interesting point touched upon. For example, the predominating *blue* generally stamps the patient as being of a nervous temperament, and so on.

In examining a tooth in regard to color one can generally find three colors. If you divide the tooth into sections the gingival third is usually yellow, with a brown or grayish hue, while the middle is usually gray, with yellow or greenish hue, and the incisal some hue of blue.

This was followed by a discussion opened by Dr. Starbuck of Iowa City.

PROPHYLAXIS.

ABSTRACT OF PAPER READ BEFORE IOWA STATE SOCIETY MAY 7, 1907.

Dr. D. D. Smith, of Philadelphia, Pa., among other instructive papers, gave an interesting and practical paper on "Oral Prophylaxis." The treatment, to begin with, was discovered, like so many other things of benefit to mankind, by accident.

A nervous child two and a half years old whose teeth were showing every sign of speedy decay was treated once a week by the lecturer with orange stick and pumice stone. This was followed up until every sign of decay had disappeared and the child at the proper time shed her teeth with no irregularities whatever of nature. Subsequently a perfect mouthful of permanent teeth was the result.

Dentistry is not respected as it should be by the medical profes-

sion because their motto is not to "help humanity and stop decay" as it should be. If dentists would adopt this prophylaxis treatment on patients, keeping the teeth smooth by polishing once in four weeks, not only teeth would be benefited, but a number of troubles under the jurisdiction of the medical profession would be avoided. Tonsilitis, for instance, can and has been not only avoided but *cured* by the prophylaxis treatment. Pyorrhœa also by the removal of infections along the gums, this treatment making them tense and hard. Sore throat will be less frequent also. Take two hundred children—relative conditions and surroundings being generally the same—one hundred subjected to Dr. Smith's treatment will, *all of them*, it is safe to say, reach maturity safely. The other hundred not so treated, *seven* of them will have tuberculosis.

It is stated by Dr. Smith that 75 per cent if not 90 per cent decay of teeth will be avoided if prophylaxis is used.

Statistics show that out of 11,000 recruits for the Boer war only 3,000 were accepted. The other 8,000 being rejected *presumably* on account of the condition of the teeth.

Surely, indeed, with such a record of an enlightened people, is it not time that work should be done in the line of prophylaxis as advocated by Dr. Smith?

A discussion followed, led by Dr. Warren, of Missouri Valley. Dr. Warren thought Dr. Smith's treatment very efficacious, but too metropolitan for the ordinary practitioner. Dr. Warren also advocated rinsing of mouth after meals, and also emphasized the harm of "nibbling" between meals.

MEETINGS

NATIONAL SOCIETY MEETINGS.

National Association of Dental Examiners, Minneapolis, Minn., July 26, 27, 28.

National Dental Association, Minneapolis, Minn., July 30.

Institute of Dental Pedagogics, New Orleans, December 30 to January 2, 1908.

STATE SOCIETY MEETINGS.

Indiana State Dental Association, Indianapolis, June 11, 12, 13.

Maine Dental Society, July 16.

Michigan State Dental Association, Saginaw, June 4, 5.

Minnesota State Dental Association, Minneapolis, July 30, Aug. 3.

New Jersey State Dental Society, Asbury Park, July 17, 18, 19.

Virginia State Dental Association, Jamestown, Sept. 10, 11, 12.

Wisconsin State Dental Society, La Crosse, July 16, 17, 18.

INSTITUTE OF DENTAL PEDAGOGICS.

The executive committee selected New Orleans for the fifteenth annual convention, and December 30, 1907, and January 1 and 2, 1908, the dates.

SOUTH DAKOTA STATE BOARD.

The next examination of the South Dakota State Board of Dental Examiners will be held at Sioux Falls, S. D., beginning at 3 o'clock June 6, and continuing three days.

All candidates are required to bring operating instruments, including dental engine and such other appliances and materials as are necessary to do crown and bridge work.

All applications, together with \$10 fee, must positively be in the hands of the secretary by June 3, and no applications will be considered thereafter.

G. W. COLLINS, Secretary.

TENNESSEE STATE BOARD.

The Tennessee dental law has been recently so amended as to require all applicants for registration to be graduates of reputable

dental colleges, and they must also pass a written examination by the State Board and give a practical demonstration of proficiency in operative and prosthetic dentistry. Examination fee, \$10. The next annual meeting of the board will be held at Nashville, May 16, 1907. With the other important amendments made at the same time, the Tennessee dental law is now on a par with other state dental laws.

F. A. SHOTWELL, Secretary.

ILLINOIS STATE DENTAL SOCIETY.

The Forty-third annual meeting of the Illinois State Dental Society was held in Quincy, Ill., May 14-15-16-17. About 500 members were in attendance.

The following were elected officers for the ensuing year: President, W. H. Johnson, of Peoria; vice-president, H. L. Whipple, Quincy; secretary, Arthur D. Black, Chicago; treasurer, C. P. Pruyn, Chicago.

MINNESOTA STATE BOARD.

The State Board of Dental Examiners of Minnesota will hold a special meeting at the Dental Building of the State University in Minneapolis on June 6, 7 and 8, 1907. All applications must be in the hands of the secretary by 10 o'clock June 6, as examinations will begin at 10:30 o'clock sharp. All blanks, paper and patients supplied by this board. Operating instruments, etc., must be brought by the applicant. Any further information will be given by addressing Geo. S. Todd, Secretary, Lake City, Minn.

WISCONSIN STATE BOARD OF DENTAL EXAMINERS.

The next meeting of the Wisconsin State Board of Dental Examiners for examination of candidates for licenses to practice dentistry in Wisconsin will be held Monday, June 10, 1907, at the Wisconsin College of Physicians & Surgeons, Milwaukee, Wis.

Application must be made to the secretary fifteen days before examination. The candidate must be a graduate of a reputable dental college, or have been engaged in the reputable practice of dentistry for four consecutive years, or an apprentice to a reputable dentist for five years.

For further particulars apply to J. J. Wright, Secretary, 1218 Wells Bldg., Milwaukee, Wis.

MICHIGAN STATE DENTAL ASSOCIATION.

The Michigan Dental Association will meet at Saginaw, June 4 and 5. All ethical practitioners cordially invited.

L. N. HOGARTH, Secretary.

INDIANA STATE DENTAL BOARD.

The next regular meeting of the Indiana State Board of Dental Examiners will be held in the Capitol at Indianapolis, June 11, 12, 13, 1907. All applicants for examination to practice in the state should apply to the secretary for further information, blanks, etc. Applications for examination must be in the hands of the secretary at least five days before the above date.

F. R. HENSHAW, Secretary.

Middletown, Indiana.

INDIANA STATE DENTAL ASSOCIATION.

The forty-ninth annual meeting of the Indiana State Dental Association will be held at the Claypool Hotel, Indianapolis, June 11, 12, 13, 1907. The executive committee has arranged an unusually interesting program for this meeting. A cordial invitation is extended to the profession to be present.

CARL D. LUCAS, Secretary,

Indianapolis.

IOWA STATE BOARD OF DENTAL EXAMINERS.

The Iowa State Board of Dental Examiners will hold its next meeting for examination at Iowa City, June 6, 7, 8, 10, 11, 1907.

To be eligible to this examination the applicant must hold a diploma from a college that is on the accredited list of the National Association of Dental Examiners.

Applicant must state where he attended first, second and third year of college.

Address all communications to

E. D. BROWER, D. D. S., Secretary.

Le Mars, Iowa.

ILLINOIS STATE BOARD OF DENTAL EXAMINERS.

The next regular meeting of the Illinois State Board of Dental Examiners for the examination of applicants for a license to practice dentistry in the state of Illinois will be held in Chicago, at the Northwestern University Dental School, southeast corner of Lake

and Dearborn streets, beginning Monday, June 3, 1907, at 9 a. m.

Applicants must be in possession of the following requirements in order to be eligible to take the examination: (1) Any person who has been engaged in the actual, legal and lawful practice of dentistry or dental surgery in some other state or country for five consecutive years just prior to application; or (2) is a graduate of and has a diploma from the faculty of a reputable dental college, school, or dental department of a reputable university; or (3) is a graduate of and has a diploma from the faculty of a reputable medical college or medical department of a reputable university, and possesses the necessary qualifications prescribed by the board.

Candidates will be furnished with proper blanks and such other information as is necessary on application to the secretary. All applications must be filed with the secretary five days prior to the date of examination. The examination fee is twenty (\$20) dollars with the additional fee of five (5) dollars for a license.

Address all communications to

J. G. REID, D. D. S., Secretary.

1204 Trude Building, 67 Wabash Avenue, Chicago, Ill.

INDIANA DENTAL COLLEGE.

Graduating exercises of the Indiana Dental College were held Friday evening, May 10, at English's Opera House, Indianapolis. An address by James David Hoffman, M. E., was followed by conferring of degrees by Dr. John N. Hurty.

CLASS ROLL.

Henry Clay McKittrick
Clarence Debria Mitchell
Robert B. Murphy
Charles Edward Pease
Edward J. Pedlow
Zenana C. Rector
Everett W. Ross
Alvin Arvin Smeigh
Cecil Hugo Smith
H. Guy Smith
Harry Lloyd Smith
D. Kerr Spittler

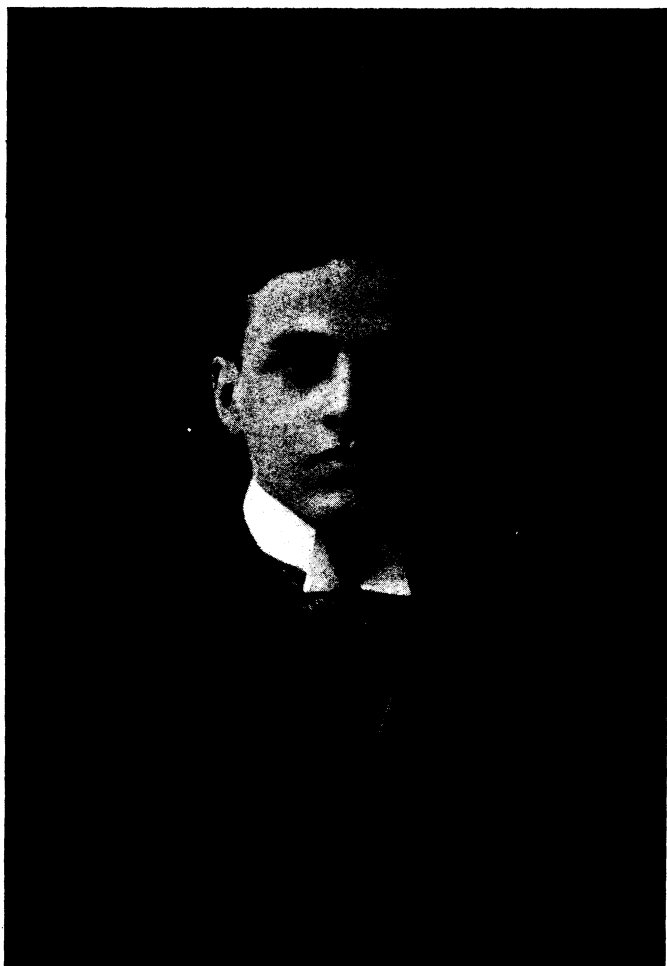
Clyde Lindley Jones
Nils Wolner Juell
Philip Albert Keller
Bert Koons
Harry Albert Koss
Rufus B. Kuykendall
William Joseph McGrath
Hugh Parks McKeand
Dwight D. DuBois.
John Franklin Adams
Maurice Palmer Avery
John Omar Bicknell

Arthur LeRoy Steward
George V. Underwood
John M. Walsh
Frank B. Warvel
Cyrus Clyde Wright
James Duncan
Charles Asbury Eller
Karl L. Freeman
Daniel Ernest Gruber
George Hein
William Henry Heyler.
Howard Huffman
Edna Ordell Jenkins

George Coleman Biggs
Antonio Bogran
Raymond L. Bosler.
Arthur James Bower
Earl Brooks
Charles Jacob Burris
Howard D. Caton
Leroy M. Childers
Ernest Davis Cofield
John Wesley Cofield
Bruce Payne Connor
Homer Leonidas Curry
Dwight L. DuBois

NATIONAL ASSOCIATION OF DENTAL SALESMEN.

The second annual convention of dental salesmen will be held at Hotel Shenley, Pittsburg, Pa., July 8, 9, 10, 1907. For information, address W. L. Smith, 800 Penn avenue, Pittsburg, chairman of arrangement committee, or E. H. Frank, 12 Brisbane building, Buffalo, chairman of advertising committee.



DR. WILLIAM NEWTON TULLER.

DR. WILLIAM NEWTON TULLER.

Toothsome Topics?

No, not this time.

Read the following and let me ask your condolence and sympathy.

Died, May 1, 1907, at Carlsbad, New Mexico, Dr. Wm. Newton Tuller, son of Dr. R. B. Tuller, Chicago, and brother of Dr. Chas. S. Tuller, New Orleans. Funeral services at Rosehill, Chicago, Sunday, May 5.

To me this is an event that sways my life; but the world moves on just the same.

It would do the same if the president of the United States, or the king of England died. To me my boy was more than these or any other great personage. Mechanically (and in time mentally, I presume) I shall move along with the world, but with a weary weight tugging at my heartstrings that forbids, for a time, the laugh and jest and merrymaking.

You have laughed with me, I am sure, many a time, in Toothsome Topics, but now—I do not ask you to weep with me, for my grief cannot be yours; but telepathically send me a thought of sympathy. No, my grief, or such as mine, cannot be yours except when death invades your homes. If you have been through such troubles you know. If you have been spared so far the time will come, then you'll know. It comes to every one at some time if they live long enough. When it strikes your hearthstone you will know and feel as you cannot before.

Sympathy did I ask for? I need not ask. Since the sad news came it has been coming spontaneously in soul-stirring, tender volume, in the spoken word; in the silent grasping of the hand; in the tribute of beautiful flowers; in messages by wire and by letter.

To many of my Chicago friends my boy was known, because he, too, chose my profession, though he had barely begun. While he had begun practice, he was yet a student, taken just in the bloom of manhood and professional life. Ill health decreed, a little over a year ago, that he must go to a healthier climate. In the far away place he recovered rapidly. All seemed to be going well for some time, and then came a day when severe pains in his side gave forewarning that an

operation must be performed. He was far from any of his dear ones, though counting many new ones. He longed for some of his own, and telegraphed, and his younger brother hurried to his side on the first train. He reached there late at night the day before the morning set for the operation. This brother was with him through that ordeal and all that followed until danger was past. Will was on his feet and had planned to again take up his professional duties the following Monday. But before that time he was taken down with typhoid fever. When the nature of the disease was told him he knew that in his enfeebled condition he could not pull through, and he wished he might be home. Very soon after that the high raging fever made him delirious, and from that time to the end, a little over a week, he was in a constant state of delirium. He was a boy that dearly loved his home, and in all his mind wanderings it was home, home, that was uppermost. He made numerous attempts to get up and go home; or he was on the cars and impatient that they were so slow getting to Chicago. Poor boy! he found home—his home everlasting.

During the operation and subsequent illness he was in a sanitarium (Carlsbad being a health resort) and was attended by the best medical skill in the place—three physicians, his personal friends, doing all they could for him. A good and faithful trained nurse, together with his brother, were constant in the performance of their duties. We feel that all was done that could have been, and we know that many kind friends there rendered every service they were capable of. This is a great consolation to my family, and to all these our hearts go out in grateful appreciation and thanks.

The last sad rites have been performed. We have laid our boy—one of our boys—away forever. Under a great blanket of beautiful flowers, the tribute of many professional and other dear friends, we left his earthly remains to everlasting rest, hoping to meet his loving spirit somehow, somewhere, in another life beyond the grave.

We cannot just understand it, our loss is so great, but the world moves on just the same, and we ourselves must take up the duties of life as heretofore; but in *our* hearts will ever linger loving thoughts of the one that was and is not. He was a lovable boy—a manly young man. The world will soon forget—the little world he knew—but we, his own dear ones, cannot.

Beneath the grease-paint of the comedian there often beats a sodden heart. Duty compels, and the merry jest and fling goes on—and perhaps it is better so.

R. B. TULLER.

MISCELLANEOUS

STERILIZING, POLISHING AND GRINDING STONES.

Brush clean with soap and water with a plate brush, and then dip in a 5 per cent solution of formalin in alcohol.—*Tri-State Dental Record*.

ABSTRACTS AND SELECTIONS.

And now, gentlemen, in closing, let me say that porcelain has come to stay. Its use may be more limited than we now think, but it has its place in dentistry, and there is a great deal of hard work ahead for the so-called "porcelain cranks."—*Items*.

HARMONY.

We have laws of harmony in music, laws of harmony in colors, as in painting; laws of harmony in lines, as in drawing, architecture, designing and ornamenting. And so we have laws of harmony that govern the architecture of man, and especially his face and teeth.—*F. H. Berry, Dentist's Magazine*.

THE FIRST PERMANENT MOLARS.

If these four keystones or pillars to the dental arches are normally arranged at the period of their development, they support the jaws during the shedding of the temporary teeth and their replacement by the permanent ones, and we are almost certain that all the other molars posterior to these will be correctly arranged.—*E. A. Bogue, International Dental Journal*.

"HAND-ME-DOWN" CROWNS.

No one thing today is doing crown and bridge work that intricate unison of operating room and laboratory, greater than these "ready-made, hand-me-down" crown methods; shells made on composite sizes like shoes; seamless system no end; "fit guaranteed and crown on in twenty minutes"; crowns constructed from plaster casts shipped to the wholesale laboratory man who advertises: "Let us do your work while you sleep, six thousand bridges made last year, see our testimonials."—*Clarence J. Grieves, Dental Summary*.

ADRENALIN-CHLORID.

The application of adrenalin-chloride to freshly exposed or healthy pulps is a decided success, but I have found from unpleasant experience that its application must be confined to such cases. The slightest pathological change in the pulp tissues seriously interferes with its successful use.—*I. N. Taylor, British Dental Journal.*

SILVER NITRATE AND CEMENT FILLINGS.

A filling of oxyphosphate of zinc placed upon a surface treated with nitrate of silver will last a great deal longer, and be a great deal better mass than the same mass not having the peculiar effect it gets from this film of silver albuminate.—*W. V. B. Ames, Dental Review.*

DENTAL INSPECTORS APPOINTED.

The Board of Education of Plainfield, N. J., has granted the request of the New Jersey State Dental Society to introduce into the schools the inspection of children's teeth without expense to the board, and appointed as examiners Dr. William E. Stelle, Dr. O. B. Whitford, and Dr. C. G. Davis.—*Plainfield Press.*

REMOVAL OF PULP WITH CALCIFIC FORMATIONS.

In case of failure to anæsthetize a pulp with cocaine and pressure anæsthesia, due to calcific formation in the pulp, I have obtained good results by the application of sulphuric acid. Make the application for a few minutes, then wipe out the cavity with sodium carbonate and many times you will then be able to anæsthetize the pulp.—*George W. Cook, Dental Review.*

TOOTHBRUSH CAMPAIGN AMONG SCHOOL CHILDREN.

A movement is on foot for a toothbrush campaign among New York City school children. As a result it may be that dental examiners will be assigned to the schools the same as medical examiners are now employed. There can be no question concerning the value of such a plan. By dental attendance upon the children there is no doubt but that the health of the pupils would be much improved. If New York inaugurates the plan with success it will not be long before many other cities throughout the country will be following the example.—*Dental Summary.*

PERSONAL AND GENERAL

Dr. A. B. E. Austin, a dentist of Gilion, Ohio, died April 20th.

Dr. James Crankshaw, a dentist of Frankfort, Pa., died May 10th. He was eighty-one years of age.

Dr. William B. Hendel, a dentist of Muskegon, Mich., died recently. He was thirty-three years of age.

Johnson-Bales.—**Dr. E. W. Johnson** and Miss Jessie Bales, both of Sarcxie, Mo., were married May 11th.

Dr. L. W. L. Rabe, a dentist of Monongahela Valley, Pa., died May 8th. He was seventy-two years of age.

McCarty-Wirick.—**Dr. L. R. McCarty** and Miss Velma Wirick, both of St. Louis, Mo., were married recently.

Feldman-Kabat.—**Dr. David Feldman** and Miss Jeannette Kabat, both of Philadelphia, Pa., were married May 21st.

Dr. T. W. Scott, a dentist of Mexico, N. Y., died of cirrhosis of the liver recently. He had been sick since February 17th.

Fined for Illegal Practice.—A dentist at Hamilton, Ohio, was fined \$50.00 and costs April 26th for practicing without a license.

Dr. L. W. French, a dentist of Los Angeles, Cal., died April 24th from a stroke of apoplexy. He was seventy years of age.

Dr. B. B. Stoddart, a dentist of Boston, Mass., committed suicide April 24th by taking poison. He was forty-six years of age.

Dentist a Bigamist.—**Dr. J. A. Turner** was arrested at Fort Smith, Ark., for bigamy. The police claim that he has twelve wives.

West Virginia Dentists Organize.—On May 15th and 16th there was held at Charleston, W. Va., the first meeting of the dentists in that state.

Twenty-three Graduates.—The Royal College of Dental Surgeons at Toronto, Canada, held its graduating exercises April 26th with twenty-three graduates.

Compton-Brownell.—The engagement is announced of the wedding of **Dr. G. F. Compton**, a dentist of San Francisco, and Miss Elva Brownell, of Grass Valley, Cal.

Colored Dentists Meet.—The Ohio Medical Association of Colored Physicians, Dentists and Pharmacists held their third annual session at Cincinnati May 16th and 17th.

Dentist Injured.—**Dr. W. Crenshaw**, at Atlanta, Ga., was painfully injured by stepping on a garden rake, the handle driving bits of glass from his spectacles into his eye.

Commencement at Southern Dental College.—The Southern Dental College at Atlanta, Ga., held its graduating exercises April 26th. There were forty in the graduating class.

Sues for Damages.—Edith Kelly, of Springfield, Mo., has brought suit against a dentist in that town for \$10,000 damages, claiming that gas administered by him impaired her health.

Denta Sigma Delta Fraternity.—The Sigma Chapter of the Dental Department of the Western University held a banquet May 1st at Pittsburg. It was attended by forty members.

Sues for Damages.—Austin Carty has begun an action in court against proprietors of the Hamilton Painless Dental Parlors of Hamilton, Canada, for \$200.00 damages for negligence.

Texas College Commencement.—The State Dental College at Dallas, Tex., held its graduating exercises May 9th. The graduates were C. B. Slaughter, A. B. O. L. Smith and E. H. Ramsey.

Dr. W. N. Tuller, formerly of Chicago, died at Carlsbad, N. M., of typhoid fever. He was twenty-four years of age and a graduate of the Chicago College of Dental Surgery. See obituary.

Commencement at Western Dental College.—The seventeenth annual commencement exercises of the Western Dental College were held May 8th at Kansas City. There were forty-one graduates.

Commencement Day at Cincinnati College.—The fourteenth annual commencement exercises of the Cincinnati Dental College were held May 7th. There were eight members in the graduating class.

Arrested.—Three dentists in Pittsburg who had been working for a dental parlor were arrested for practicing without a state license. They were graduates of dental colleges, but had not passed the state board.

Opposes State Board.—The North Dakota State Dental Association at its last meeting opposed the action of the governor in appointing two members of the state board because of their alleged violation of ethics to the profession.

Dentist Can Sell Good Will.—This decision was rendered in the case of Lewis T. Coss, et al. vs. Dr. Fred E. Roby. A Boston judge has decided that when a dentist sells his good will he cannot re-enter practice again in such proximity to the old stand as to impair the old good will.

Dentist Elopes.—Dr. J. E. Forsyth, of Sydney, Australia, who will graduate from the Northwestern University with the present graduating class, and Miss Claudia Briard, seventeen years of age, crossed the lake to St. Joe and were quietly married. They will make their home in Sydney, Australia.

Oppose Dental Bill.—The Michigan dentists held a meeting May 7th in Detroit to protest against the enactment into law of a bill that had already passed the senate without being amended in accordance with certain suggestions which had been made by the dentists. The dentists held that some of the provisions were entirely superfluous and that the license was not in keeping with the dignity of the profession. The bill provides that each dentist pay a license fee of \$1.00 annually.

Robberies.—Drs. J. H. Grant, Palestine, Tex., loss \$130.00; Davia, Palestine, Tex., loss between \$30.00 and \$50.00; Smith & Barnes, Palestine, loss \$200.00; D. J. Thorp, St. Joseph, Mo., loss \$50.00; C. H. Darby, St. Joseph, Mo., less \$25.00; Cromwell, Butler, Mo., loss \$10.00.

American as Dentist in Harem.—Word was received here today that Dr. Frank Bostwick of this city, now located at Gibraltar, has become dentist to the sultan of Morocco. The work upon the royal molars will probably consume a long time, as Bostwick is allowed to work upon them only one hour each day. The sultan endures pain well and has grown so fond of the American that he meets him each morning.

Dental Internes for Illinois.—The civil service commission for Illinois has appointed Dr. Arthur Black and Dr. H. N. Lancaster two members of a board of three to conduct examinations for dental internes for the various hospitals for the insane in Illinois. The third member of the board to be appointed. The internes will be under the supervision of the state board of charities and will be paid \$25.00 per month and board. Notice of time and place for examination will be given later.

Hugged Dentist.—Agnes Levendski called on Dr. J. Taylor of New York City to have some teeth extracted. He gave her gas. The moment she was under the influence she leaped from the chair, clasped the doctor around the neck and gave him a hug that would do credit to a polar bear. Fortunately, the doctor's wife was present and he called to her for assistance, but their united efforts would not pry the doctor loose from his patient's embrace, and they had to telephone for the police. They came and carried the girl to a hospital.

Georgia State Dental Society held its thirty-ninth annual session May 7th and 8th. About two hundred dentists were present. The following were elected as officers for the ensuing year: Dr. W. Crenshaw, Atlanta, president; Dr. T. C. Gibson, Forsyth, first vice-president; Dr. C. P. Davis, Americus, second vice-president; Dr. D. H. McNeill, Athens, corresponding secretary; Dr. D. L. Hill, Atlanta, recording secretary; Dr. H. R. Jewett, Atlanta, treasurer; Dr. H. H. Johnson, Macon, journal editor.

Removals.—Drs. Chas. Schaaf from Attica, Ohio, to Columbus; J. L. M. Gibson from Houghton, Mich., to Ishpeming; G. J. Shiels from Reedsburg, Wis., to North Freedom; E. L. Ritzenthaler from North Freedom, Wis., to Reedsburg; Fred Williams from Wilmington, Ohio, to Columbus; Fred Amundson from Valley City, N. D., to LaMoure; W. T. Wright from Ann Arbor, Mich., to Pinckney; R. L. Gray from Ironton, Ohio, to Columbus; C. V. Pollock from Ironton, Ohio, to Columbus; J. F. McCamant from Sebring, Ohio, to Warren; S. C. Reynolds from Corning, N. Y., to Saugerties; W. T. Wright from Ann Arbor, Mich., to Stockbridge; J. L. Helmer from Paynesville, Minn., to St. Cloud; F. E. Yule from Marion, Ind., to Indianapolis; W. H. McBride from Birmingham, Mich., to Ionia; J. M. Wilkes from Americus, Ga., to Tampa, Fla.

DENTAL PATENTS

831,185. Vitreous Cement for Plugging Teeth and Process of Manufacturing the Same. Josef Rawitzer, Charlottenburg, Germany. Filed February 12, 1906. Serial No. 300,737. Fig. 7. Claim.—1. The process of manufacturing a material designed for the production of cement, consisting in preparing in a wet way aluminium silicate $\text{Al}_2\text{O}_3\text{SiO}_2$, drying the same so that it contains no more than six per cent of water, mixing the said dried aluminium silicate with a finely-ground material produced by melting lime, aluminium oxid and silicon anhydrid together.

2. As a new article of manufacture a cement composed of a mixture of aluminium silicate containing not more than six per cent of water, and of a fused mixture of oxid of calcium, oxid of aluminium and of silicon anhydrid.

Fig. 1.

849,209. Combined Mouth Mirror and Lamp.—Lyter H. Crawford, New York, N. Y. Filed April 25, 1906. Serial No. 313,585. Claim.—1. A combined mouth mirror and lamp for dental use comprising a casing provided with illuminating and reflecting mediums mounted universally adjustable on a handle.

Fig. 2.

848,403. Dental Obtundor.—Perry R. Skinner, Amsterdam, N. Y. Filed August 11, 1906. Serial No. 330,121. Claim.—1. A device for spraying a tooth with an anesthetic while the tooth is being operated upon by a drill in dentistry, consisting of a tube having a delivery-point at, or near, the point of the drill, and the other end having an opening provided with screw-threads.

Fig. 3.

845,835. Gas-Regulator for Dental Vulcanizers.—Elmer E. Wightman, Chicago, Ill. Filed June 7, 1905. Serial No. 264,110. Claim.—1. A gas-regulator, comprising a casing having an inlet and an outlet passage, a Bourdon tube and valve controlling one of said passages, a shaft connected to said tube, adapted, through its radial position, to vary the resistance of said tube, and extending, transversely of the plane in which the tube is curved, to the outside of the casing, said shaft having a conical shoulder inside of the casing, and said casing having on the inside an oppositely-formed seat for receiving said shoulder.

Fig. 4.

849,297. Dental Swaging Device.—George J. Weber, Liberty Center, Ohio. Filed November 15, 1905. Serial No. 287,532. Claim.—A dental-plate-swaging device comprising a cup, a counter-die of plastic material therein terminating below the upper edge of the cup, said die being provided with a forming-cavity and a plane marginal seat-face between the same and wall of the cup, a plunger adapted to fit at its lower end in the upper portion of the cup and provided with a recess of greater width and length than said forming-cavity.

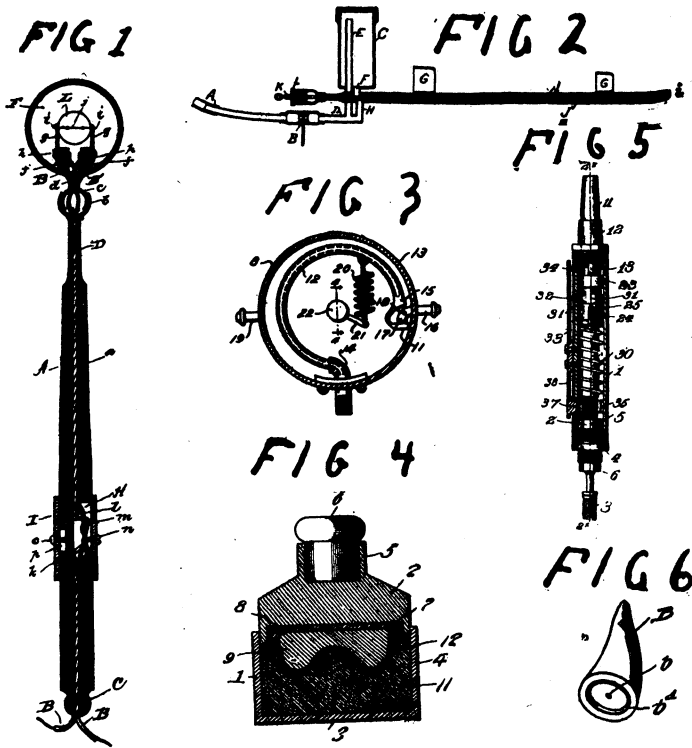


Fig. 5.

847,591. Dental Handpiece.—Henry S. Miller, Rochester, N. Y. Filed June 22, 1904. Serial No. 213,583. Claim.—1. In a dental handpiece, the combination with a casing and a spindle therein, of a tool co-operating with the spindle and a locking device in the latter adapted to engage the tool, means for moving said device into operative position and a sleeve extending exteriorly of the casing forming a bearing for the spindle and movable into engagement with the locking device to disengage it from the tool.

Fig. 6.

833,254. Dental-Crown Construction.—Carl A. Skalstad, Chicago, Ill. Filed June 14, 1905. Serial No. 265,224. Claim.—1. A dental-crown construction comprising a flanged plate having its flanged back provided with a pin, both the flange and the pin being inserted in the stump or root, and the face or outer surface of the said plate having a pin or projection extending therefrom, an integral projection extending laterally from said pin, together with an artificial tooth suitably secured to said pin or projection.

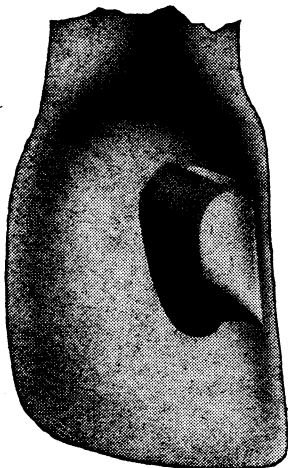
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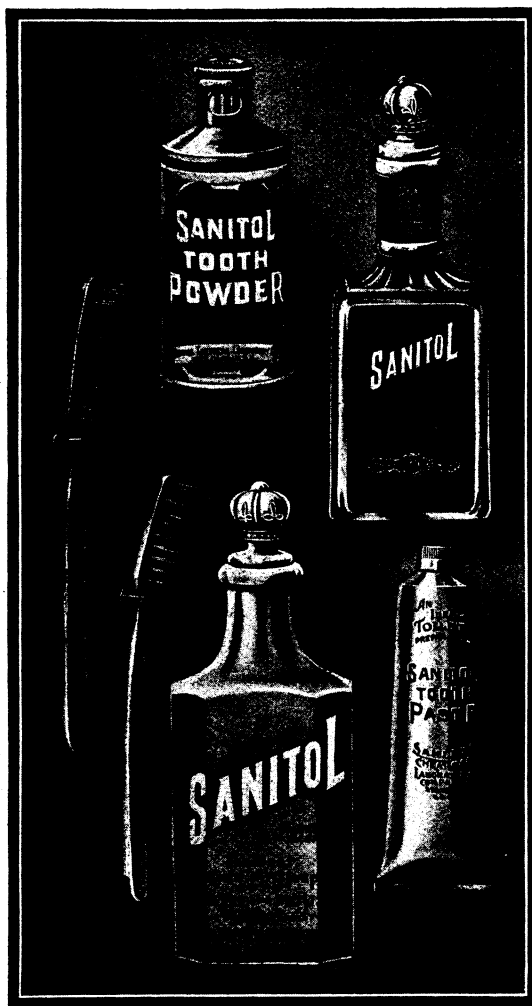
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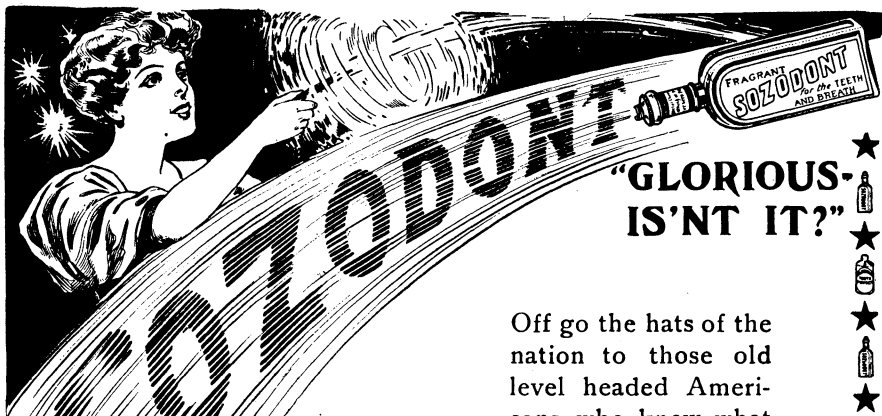
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I do not believe that the majority of physicians and dentists who take stock in these preparations do so for mercenary reasons or on account of poor morals. I believe, on the other hand, that they have become thus involved as a result of carelessness. The average busy doctor has little time to consider such matters, and when approached by a hustling solicitor is likely to accede to said solicitor's wishes, to get rid of him if for no other reason; and I think that many of these gentlemen, upon due consideration, would perceive the wrong principle in this kind of graft and would withdraw therefrom.

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But a more serious matter is the effect on the patient. Sooner or later people will find out the connection between the prescriber and manufacturer, if any connection exists. The result is loss of confidence in the complete integrity of the doctor. Suppose a doctor earned through his small block of stock a profit of \$10 or \$20 a year, what is that compared with the risk of losing even one good patron?

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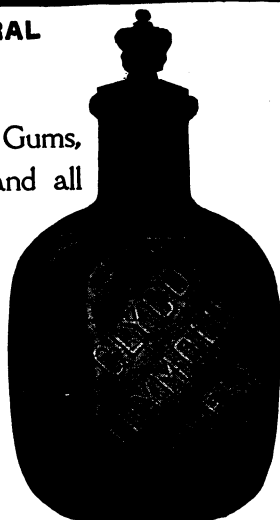
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